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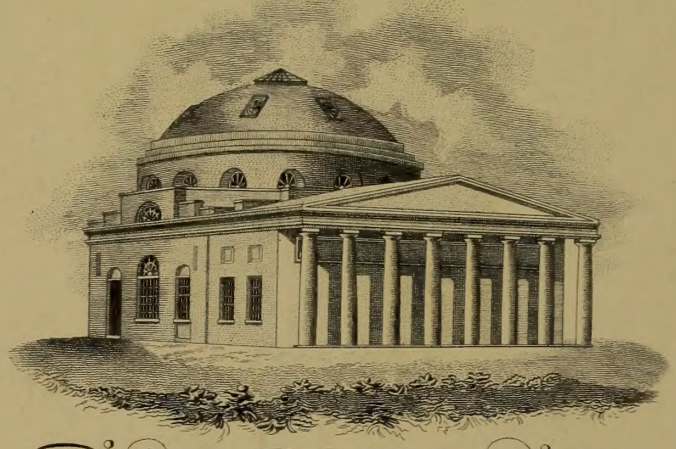

University of Maryland

The Papers of Edward Tyler

Early Decades of Medicine and Science in Florida: Dissertations with Consolidated Tables of Contents

These manuscripts described as either an inaugural Dissertation or an Inaugural Essay were presented to the University of Maryland for the Degree of Bachelor and/or Doctor of Medicine during the years 1815-1837. The four final dissertations were bound together during the 1840's. The original tables of contents for the bound volumes contained multiple errors in authors' names, titles, and/or years. To address these errors, an additional "Consolidated Table of Contents" has been inserted at the beginning of each volume.

The original team who investigated and corrected the errors of contents were: Richard J. Barker, Historical Library/Archives Curator, Maria Allegra Fiedler, Materials Management Librarian, Angela Cochran and Hoover Berry, Resources Director, Sarah Hawke, Alex Salazar and Angela Wright, Services Director.

These dissertations were digitized in 2011-2012 and are available in the UM Digital Archives (archives.lib.umaryland.edu) and the Internet Archive (www.archive.org).

University of Maryland Theses

Early Doctor of Medicine and Doctor of Physic Dissertations with Corrected Tables of Contents

These manuscripts described as either an Inaugural Dissertation or an Inaugural Essay were presented to the University of Maryland for the Degree of Doctor of Medicine and/or Doctor of Physic during the years 1813-1887. The individual dissertations were bound together during the 1940's. The original tables of contents for the bound volumes contained multiple errors in authors' names, titles, and/or years. To address these errors, an additional "Corrected Table of Contents" has been inserted at the beginning of each volume.

The project team who investigated and corrected the tables of contents were Richard J. Behles, Historical Librarian/Preservation Officer; María Milagros Pinkas, Metadata Management Librarian; Angela Cochrane and Carol Harling-Henry, Resources Division; Sarah Hovde, Abra Schnur and Megan Wolff, Services Division.

These dissertations were digitized in 2011-2012 and are available at the UM Digital Archive (archive.hshsl.umaryland.edu) and the Internet Archive (www.archive.org).

(CORRECTED TABLE OF CONTENTS)

UNIVERSITY OF MARYLAND

THESES

1856 (b)

Author	Title	Notes
Espin, Jose' Rafael	Epistaxis	
Baden, Joseph Abell	Pneumonia	
Brewer, George Gaston	Pleurisy, Acute and Chronic	(faded ink)
Shower, Theodore Adam	Scarlet Fever	
McCauly, Laurence James Augustine	Intermittent Fever	(partially faded)
Barber, Philip Daniel	Pleurisy [1]	(partially faded ink)
Ireland, John Fielder	Acute Laryngitis	
Mudd, Samuel Alexander	Dysentery [2]	
Hellen, William Dawkins	Acute Rheumatism	
Mudd, James Marcellus	Small Pox	
Garrott, Erasmus	True Croup	(faded)
Bowlen, George W.	Chloroform [3]	
Betts, Solomon, Jr.	Pregnancy	
Tuck, Washington Greene	Acute Pneumonia	
Jordan, Thomas Martin	Phthisis	(partially faded)
Best, William Janney	Pneumonia	

[1] Bound out of order.

HSHSL 2012 for the UM Digital Archive. Sources consulted for corrections: Original Dissertation; University of Maryland Medical Faculty, Matriculation List, 1821-1851; Cordell, Eugene F. "University of Maryland, 1807-1907" (New York : The Lewis Publishing Company, 1907), Volume 2.

2 Doctor who aided Booth.

3 Noteworthy title page for clarity and standard content-Doctor of Physic: Bowlen, Jordan and Best.

Author	Title
McGary, Peter Joseph	Syphilis
Pollock, Lewis Lawrence	Predisposing Causes of Disease
Stonebraker, Abraham S.	Chorea Sancti Viti (partially [illegible])
Dickinson, Albert Harrison	True Croup
Harris, Chapman	Gravel

HSHSL 2012 for the UM Digital Archive. Sources consulted for corrections: Original Dissertation; University of Maryland Medical Faculty, Matriculation List, 1821-1851; Cordell, Eugene F. "University of Maryland, 1807-1907" (New York : The Lewis Publishing Company, 1907), Volume 2.

UNIVERSITY OF MARYLAND

THESES

1856 (b)

Espin, Jose' Rafael	Epistaxis	22p.
Baden, Joseph Abell	Pneumonia	35p.
Brewer, George ~~G.~~ Gaston	Pleurisy, Acute and Chronic	21p.
Shower, Theodore ~~A.~~ Adam	Scarlet Fever	19p.
McCauly, Laurence ~~J.A.~~	Intermittent Fever	19p.
Barber, Philip ~~D.~~	Pleurisy	25p.
Ireland, John ~~F.~~ Fielder	Acute Laryngitis	18p.
Mudd, Samuel Alex	Dysentery	40p.
Hellen, ~~Wm. D.~~ William	Acute Rheumatism	24p.
Mudd, James ~~M.~~	Small Pox	45p.
Garrott, Erasmus	True Croup	24p.
Bowlen, George W.	Chloroform	45p.
Betts, Solomon, Jr.	Pregnancy	68p.
Tuck, Washington ~~G.~~ Greene	Acute Pneumonia	26p.
Jordan, Thomas ~~M.~~ Marion	Phthisis	44p.
Best, ~~W.~~ William Janney	Pneumonia	26p.
McGary, Peter ~~I.~~ Joseph	Syphilis	25p.
Pollock, Lewis ~~L.~~ Laurence	Predisposing Causes of Disease	24p.
Stonebraker, ~~A.~~ Abraham S.	Chorea Sancti Viti	47p.
Dickinson, Albert ~~H.~~ Hanson	True Croup	41p.
Harris, Chapman	Gravel	33p.

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An
Inaugural dissertation
on Epistaxis
Submitted to the examination
of the
Provost, Regents
and
Faculty of Physic
of the
University of Maryland
for the degree of
Doctor of Medicine
by
José Raynal Espin of Cuba.
1856.

To

My venerable friend and guardian
Mr. Pierre Cherbonnier.
of Baltimore Maryland.

A scholar without pedantry,
A philosopher without pretention.
An Octogenarian without moroseness.

This humble thesis is dedicated
as a tribute of respect and gratitude,
for his kind and paternal care
while pursuing my studies—

J. R. E.

February 14th 1856.

I hope it is unnecessary to invoke your favour and indulgence, by enumerating the difficulties which beset the medical student; you have traversed the same route, and no doubt remember how perplexing it is to select a subject from the almost-infinite number which present themselves. It is still more perplexing to decide, how to treat that subject, aware that the lack of knowledge and experience precludes the possibility of presenting any thing new, or even giving a useful hint. To these difficulties I may be allowed to add a not less important one, that of writing in a language which, though rendered familiar and agreeable to my ears by your kind instruction in the lecture room and out of it, is entirely different

from the one first used by my tips, and with which I am more familiar.

The subject I have selected is Epistaxis, or bleeding at the nose. Derived from, επι upon, and, ταξις I flow drop by drop, which, as we shall see, expresses only in part the manner in which the blood exudes from the nostrils, sometimes drop by drop sometimes in a continuous stream.

In Epistaxis the blood proceeds from the nose, that eminence occupying the middle of the face, bounded above by the forehead, below by the upper lip, and the orbits and superior maxillary bone on the sides. Two small quadrilateral bones constitute the upper part, and are attached to the os frontis posteriorly, and anteriorly to the cartilages which give to it the pyramidal shape so diversified in different

individuals. Both cartilages and bones are covered externally by muscles and integument; while internally they have a mucous membrane abundantly supplied with sensitive filaments of the fifth pair of nerves, but more especially with the Olfactory or first pair which has its seat in this organ.

The nose contributes materially in the formation of the voice, and in the act of respiration. Its mucous membrane is supplied with blood by the nasal or spheno-palatine artery a branch of the internal maxillary, it supplies the superior meatus and sends branches to the anterior part of the nose; the other arteries are the ethmoidal branches of the ophthalmic.

The veins are also numerous and in more or less immediate communication with those of the head neck and face.

The exposed position of

the nose, together with the large number of vessels which ramify in it, and the communication with vessels from other parts of both face and head, render it a safe outlet from which, any undue amount of the circulating fluid endangering the vital organs of the head, may be discharged so as to prevent disastrous results. This salutary purpose is attended in some cases with untoward consequences, both as regards the inability of the system to to prevent the flow the moment a sufficient quantity is thrown off, and also from the impoverished condition of the remaining fluid.

In the normal healthy state of the body the blood has a certain amount of solid and fluid constituents necessary for the nutrition and secretion of various organs. Water forms

the largest part of these constituents in the proportion of seven hundred and eighty four in a thousand parts of blood, the next in quantity are the red corpuscles forming one hundred and twenty seven parts, these are circular flattened cells one three thousandth or one four thousandth part of an inch in length and one ten thousandth in thickness. These give to the blood its beautiful scarlet color. There are two and two tenth proportions of fibrine, circular or spherical cells of a grayish color mesuring one two thousand five hundredth of an inch in diameter; besides there are seventy parts of albumen and twelve and eighty hundredth parts of saline, fatty and extractive matter.

Hæmorrhage then, denotes a break forth, is the flowing of blood with all its constituents, and Epistaxis or nose Hæmorrhinorrhagia is a hæmorrhage

from the nostrils.

Epistaxis accompanies different diseases of which it is a symptom, and its character serves to point out different pathological conditions. I shall treat it like an independent affection, and divide it into active and passive.

In youth, when the functions of the body are properly performed, when the individual enjoys full innervation and calorification, the stomach digests with facility nutrient substances, and the secreting organs furnish the material for the assimilation of food and elaboration of blood, the surface of the body presents a florid hue, the muscles display their strength, the brain acts with freedom and power, as shown by hilarity of spirits and felicity of thought. This is full health.

Whatever would tend to

disturb this state, whether by greater assimilation or by less expenditure of material will produce plethora or polyæmia. In this case blood, if attracted to a part, will proceed with rapidity and strength, producing an afflux of blood, and if acute and hæmorrhage take place it would be active or Sthenic.

In an opposite condition, when the body is improperly nourished, the surface is pallid or livid, the muscles are flabby, the lips, conjunctiva of the eyes and orifices of the nostrils are blanched the gait is unsteady, the head bowed down, the mind sluggish and the spirits low, the nervous system acts irregularly, and the most trifling occurence is sufficient to irritate or frighten. Blood attracted to a part would only produce congestion, and in case of hæmorrhage a passive or asthenic hæmorrhage.

Between these two different conditions there are various grades ranging more or less to Asthenia or Sthenia.

How does the blood get out of the blood vessels? These are in general composed of three coats, an internal a middle and an external coat, each of which can be subdivided into two or more constituents, but in which no pores have been found for the blood to pass through. They are perhaps so minute that the highest magnifying powers cannot discover them.

There only remains one way for the blood to exude; that is by rupture of the blood vessels, for, allowing the existence of pores in the vessels, it cannot be conceived that a red corpuscle, a circular cell one three thousandth or one four thousandth of an inch in diameter could pass through pores so minute that they can

be perceived.

The rupture of the vessels is easily perceived in active Epistaxis where we have the following symptoms. For several hours sometimes, several days, the patient feels heaviness about the head, and drowsiness preventing any effort of mind even for the most trivial things; his face is flushed; the carotids and temporal arteries are throbbing, the eyes are suffused, he has ringing of the ears, and his whole system is in a feverish state. Soon the nerves of the nose become irritated from the pressure of the distended blood vessels, he sneezes the blood vessels are ruptured and the stream of blood rushes from one or both nostrils.

By degrees all the the symptoms begin to subside as well as the bleeding which may stop of its own accord leaving the patient entirely relieved. It

other times the bleeding continues till the patient faints, or till means are employed to stop it, or it may continue till the patient dies from the loss of blood.

I say that we are compelled to admit that the force of the column of blood will distend the vessels of the nose as far as their elasticity will allow, and having overcome all resistance the vessels will break.

Suppose that the vessels of the nose preserve their integrity, the most disastrous consequence will take place which will cause the rupture of the blood vessels of some other part of the body. The blood vessels of the brain become distended, and though they possess the same amount of resistance as all other vessels, they break occasioning fatal apoplexy.

The other variety of Epistaxis is the passive which, as seen from the preceding, has somewhat distinctive symptoms. These

are generally nervous in their character and though the face may have a very slight rosy tint, the conjunctiva is still pallid, and the orifices of the nostrils have a yellowish color. The patient is restless and weak, and when the blood oozes from the nose it does so drop by drop, it is of a pale color indicating the diminution of red corpuscles. Faintness occurs sooner and active means for stopping the hemorrhage are more necessary.

In the most anaemic patients there is an excitement about the head just before the occurence of Epistaxis. the heart beats more and more frequent, for the blood sent to the parts, wanting in nourishing qualities, the heart is continually excited to action to give them their supply.

The head as the principal organ, and nearest to the heart appropriates to itself the largest amount of blood which being

poorer, it accumulates and produces congestion. The congestion is more and more increased and kept up by this vis a tergo, and the poorly nourished vessels become brittle and easily yield. The congestion augmented by the vis a tergo and the state of the vessels conspires to produce the effect, Epistaxis

One of these causes is sometimes sufficient to produce the effect. I recollect a young healthy man attempting to lift a very heavy weight produced such a compression, that two streams of blood rushed from his nostrils.

If bleeding from the nostrils is produced by rupture of the coats of the vessels, it may be argued from analogy that hemorrhages from other parts also depend on rupture. So with hemorrhages occurring periodically, and while the system is performing its physiological functions, in which we cannot suppose

rupture, and in which a division has not been found.

It is said for example that, in women with procedencia Uteri, the menstrual discharges are perceived to take place without any rupture in the uterine vessels. We know that, before the appearance of the menstrua, there is a congestion of the Uterus to such an extent in some women as to confine them to their beds. Besides the vessels of the Uterus before distributing in that organ are divested of their two external coats, keeping the inner delicate one, which can with facility be ruptured by the afflux of blood. The orifice in the thin membane of a minute vessel will no doubt be imperceptible, especially as the sides will unite soon after they discharge their contents. Their distension occurs again and again and the vessels burst in the same manner, like some secreting blind glands are supposed to do.

A gentleman had spent several days on

the month of August firing his garden, and was taken with bleeding at the nose which lasted three days, at the end of this period he took two or three large doses of quinine and the bleeding stopped. This case was urged to me as of passive hemorrhage in which the quinine gave tonicity to the vessels and prevented the continuance of the exhaustion of blood from the pores.

It appears on the contrary that quinine could not produce so speedy a tonic effect, but by sedating the heart's action, as it always does in large doses, it gave time to the formation of the plug.

The same gentleman then mentioned a case in which he thinks nothing but exudation of the blood could have happened. The case is reported by Mr. Bretonneau. A man suffered from inflammation of the knee joint, and had

leeches applied to it. Sixteen months after he went to one of the Parisian hospitals, was found to have syphilis and therefore put under the mercurial treatment. As soon as the constitutional effects of the mercury took place, the old leech-bites which had been healed sixteen months previously, gave passage to such an amount of blood as to require active means for its arrest.

Mercury, besides its alterative properties, possesses a very strong antiplastic quality, diminishes the fibrine of the blood, prevents the formation of membranes, and produces absorption. May we not suppose that it produced in the leech bites the whole of its specific power?

Thus far we have endeavored to show that in hæmorrhage from

the nose, whether active or passive, if we find red and white corpuscles, we must admit that the blood vessels have been ruptured.

It may be added that there are exudations from the vessels which, from their scarlet color, are improperly called hemorrhages; but if examined, there will not be found the blood corpuscles, whose coloring matter has tinged the serum.

Persons who have indulged in the excessive use of alkalies, or those suffering with purpura hemorrhagica and scurvy, have these red blurbs from almost every part of the body. The alkalies in the first, and the hygienic conditions in the latter tend completely to defibrinise the blood, rendering it watery. The density of the fluid in the red corpuscles, and that of

the surrounding liquid having changed, endosmosis and exosmosis take place, and when the watery liquid exudes from the vessels it has the red coloring matter.

Epistaxis, being a symptom of disease, can be produced by many causes besides direct violence. It takes place in various fevers as the typhoid and exanthemata. General plethora predisposes to it as well as whatever produces congestion. It is a very valuable symptom in old persons, in whom it shows obstructive disease of the heart, also occurs in affections of the liver. The most frequent causes are muscular efforts, a tight cravat, stooping, and exposure to heat. Irritating powders and other substances applied to the nose, the stimulation of cold air, any stimulant drink or

food. More than once have I seen in a boy after eating something disagreeing with his stomach, his heart commence to beat with frequency, his face become flushed, and his disposition so irritable that the simple addressing of a word, made him cry, and continued in this condition till the Epistaxis commenced.

A frequent cause is also the arrest of hamorrhage from other parts, as from hemorroides and from mensis. Women have been known to have bleeding at the nose every month instead of the Uterine discharge.

It is hardly necessary to mention the manner of diagnosing Epistaxis; for in most cases the blood is seen flowing from one or both nostrils. Sometimes however it occurs during sleep

and the blood flows through the posterior nares, and produces nausea and vomiting simulating hematemesis or by entering the glottis excites coughing like hæmoptysis. Yet in both these cases there is sufficient blood left in the nose to show, if the nose is blown, that it proceeds from it.

Epistaxis acts in many cases as a curative means employed by nature to relieve overfullness, and therefore is favorable: but it might take place in weak, old and anæmic persons, occasioning a prostration from which they may not recover. It may occur when there is nobody to stop it, and as in some protracted diseases be unmanageable and produce or hasten death.

Epistaxis is almost always under the control of remedies, or it stops of its own accord, as in the case of the boy previously alluded to, it stopped as soon as it produced faintness.

One of the simplest modes is by dashing cold water upon the forehead and face, or applying ice to the back of the neck. It has been recommended to loosen the cravat or any thing which produces compression on the patient's body. To place him in an airy apartment in an erect posture, with one arm raised above the head, the hand of the opposite side compressing the nostrils. Or both arms elevated and an assistant compressing the nose. The benefit of this is supposed to lie in the derivation of the current of blood from the head to the arms which, being

elevated, requires the strength of the circulation to be directed to them more so than when dependent.

In case we desire to discontinue the flow of blood and the patient is of a plethoric disposition, or when there is sanguineous determination to the head, we may bleed from the arm and use hot pediluvia. Finely powdered alum may be insufflated into the nostrils, or acetate of lead in powder or solution. Tannic acid, kino charcoal and other astringents may be directly applied. The ergot of rye by its sedative as well as astringent influence on the mucous membranes, whether locally applied or through the general system, will undoubtedly be useful.

When the hemorrhage resists all the means enumerated we must use the plug, not only for the anterior

but also for the posterior nares. For this purpose a ligature with a noose is introduced through the anterior nares in such a way as to be seized by the finger in the mouth. A piece of sponge or lint is attached to this end, and the ligature is drawn by the piece hanging from the nose. The anterior nares are next plugged.

The only thing which remains is to prevent the recurrence of Epistaxis. This is done by attending to the system. If it is plethoric, blood letting, diminution of diet or purgatives must be used every time Epistaxis is threatened. In case the system is weak, tonics such as quinine or the preparations of iron are the most reliable.

An

Inaugural Dissertation

On

Rheumatism

Submitted to the Examination

of the

Honorable Regents and Faculty of Physic

of the

University of Maryland

for the

Degree of Doctor in Medicine

By Joseph Abell Buck

of Maryland

Pneumonia

Not the least important of the diseases comprised in the Nosological Catalogue, and in that of its type, one of the most interesting to the medical mind is Pneumonia or Inflammation of the Lungs – a disease of frequent occurrence, often terminating fatally or, if life be prolonged, one of the worst afflictions not restored to perfect Organic tone and vigour, followed by consequences painful and distressing, tending sooner or later to cause the death of the Individual. The essential nature of the disease is now very generally, if not universally, by all observant Pathologists, admitted to be Inflammation of all the tissues which enter into the composition of the lungs but not necessarily, throughout their entire extent since such a condition would speedily and almost certainly involve a fatal result; A single lobe, or less, a lobule alone may be the seat of the inflammatory process and type the disease when more extensive, as when it implicates the whole or large portions of either Lung, presenting, though, perhaps not so markedly, most of the Phenomena requisite to establish its true Character.

The Lobar, or that in which one or more of the Pul=

=monary Lobes furnishes a habitat for the inflamma=
tion, Action, is the most common form in which Pneu=
monia is observed to present itself. And it is this
form in which it is proposed here to consider it.
In doing so it will be proper to examine, first, the
anatomical Characters peculiar to it in the various
stages of its progress, before the general symptoms &
physical signs which guide to a correct Diagnosis or
enable the practitioner to recognize its specific na=
ture, are spoken of. –
Writers upon the subject usually ascribe to the dis=
ease three stages corresponding to the changes which
are successively produced in the affected organ
founding their division upon the investigations –
made by Andral and Gerhard, simplified by sub=
sequent research into its pathological history. These
stages are: first, that of Engorgement; second,
that of fully and unequivocally developed Inflam=
mation or Hepatization; and third, that of Purru=
lent infiltration
In the first stage, – that of Engorgement, which has
also been termed splenization from the resemblance
borne by the lung in this condition to the spleen in

Consistence - the congested portion is externally of a dark red colour approaching livid, its specific gravity is increased by the greater amount of blood contained within its substance, it is greater, however as that of water in consequence of its containing still within its vesicles, particles of air. Manifest from the floating of the entire organ or a portion of it, if placed upon the surface of that fluid; when pressed between the fingers it crepitates from the escape of bubbles of air through the partially obstructed and narrowed tubes. its consistence is of a tough character, the impression made by the tissue substance being permanent instead of the elasticity characteristic of healthy lung being manifested by a speedy removal of the indentation: when cut there exudes a quantity, more or less great according to the violence of the congestion, of serum mixed with blood, at times frothy from the presence of air; the divided surfaces exhibit various shades of redness, from the scarlet tint of arterial to the dark livid hue of venous blood the natural vesicular texture of the lung may still be distinguished, becoming more evident, as does also

its natural Colour and Tenacity, by repeatedly washing it in water. Its Molecular Cohesion is also very materially lessened. the part which constitutes the seat of the Engorgement being more easily torn by slight force than in the healthy condition. Owing it is probable to the sanguineous congestion. be distending and drawing out the vesicular walls as to render the mass of which they form a large portion less tenaceous, less capable of withstanding the violence employed. From all this however no positive evidence can be gained that the condition described belongs to the primary and incipient stage of a Pneumonia. since Autopsical investigations have proved that the same state is observable in the lungs of a majority of dead bodies.

Second in the progress of this much to be dreaded malady is the stage of fully developed inflammation or Hepatization - which latter name it has derived from the similitude between the hepatized portion and the liver (ἧπαρ) in consistence gravity &c.

Its colour is but slightly changed from that which exists in the former stage, the lobe frequently times, however, besides being lighter in appearance

presenting a mottled aspect from the degree of the modifying cause being greater in some parts than in others: its specific gravity is now greater than that of water, even with the surface of which it sinks. This increase in weight, owing, as might naturally be supposed to the engorgement of the organ with fluid pressing upon and obliterating the cavities of the air cells, and excluding that highly elastic fluid which in a state of health gives buoyancy to the organ. Such occlusion of the cells being evident from the fact that there is now no crepitation produced by pressure of the fingers on other solid substance; the whole lung seems to be increased above its natural size, attributable, in a great measure, to its inability, from its being engorged with fluid, to collapse when the thoracic parietes are laid open, as in the healthy condition. It is invariably found to arise from the want of equilibrium between the air contained within and the external atmosphere, when a portion of the lung in this stage of pneumonia is incised, bloody serum is observed to be poured out, less in quantity than in the first stage and having

[illegible] with it, at times, yellowish, [illegible] matter giving indication of the [illegible] of the last stage that of purulent infiltration. This matter is not seen to contain, as in the former case bubbles of air and is not, of course, the cause being removed frothy. – The most remarkable phenomenon, however, and that most characteristic of this stage of the disease is the granulated appearance of the [illegible] or torn surfaces, and from which in connection with other circumstances it has [illegible] the [illegible] system. The cause of this is [illegible] to thickening of the vascular walls and obliteration of the cavities of the air cells by a concretion. A more probable explanation, we think however is that offered by Dr Williams who believes that these granulations consist of minute branches of vessels whose cavities have become obliterated [illegible] of fibrinous substance [illegible] and from the greater increase of the stage of their thickness. The texture of the hepatized portion is so softened as to render it easily crushed and even prepared by pressure with the fingers

of the lungs. The reason of which fact may be very clearly comprehended. When it is reflected that the lung in this condition is congested with fluid, inelastic incompressible and consolidated in its character, a very great pressure which does not relax before the pressure made by the solid substance as does the air in the natural state, thus obviating its rupture, but by hindering the recession of the pulmonary substance occasions its easy laceration.

Such stage of all is the healing of the changes produced in the lungs — the ground of the "Vital Evidence". This disease is that of pneumonic inflammation or supposed hepatization, gray hepatization or gray softening, each phrase being variously termed by Pathologists, all having reference to that condition in which there is diffused hepatization of that portion of the parenchyma of the lungs which has been affected by the morbid changes before described. The external surface of the affected portion is now of a greenish yellow or grayish brown [illegible]. Its texture is to some extent thickened, it being more easily lacerated, and broken up, from the torn or divided surfaces there oozes out more or less abundantly according to the longer con

shorter duration and evidence of the subsequent presence of matter of a puriform nature. A history of the cause of this production would explain also the cause of the greater friability of this part, both being referable to the same agency. An artificial cavity formed in the diseased portion by pressure with the points of the fingers becomes speedily filled with pus: and to so great an extent is the organ friable that such cavities are not unnecessarily formed inadvertently by the manipulation used in its examination and may be mistaken for abscesses which, as a consequence of Pneumonic inflammation occurring idiopathically, are, it is generally agreed, exceedingly rare. Why encysted abscess as a result of Pneumonia is rare! is a question that has been agitated by Pathologists. Dr Watson's explanation seems to be not the least plausible, viz. that atmospheric air conveyed through the still permeable air tubes to the inflamed part causes the suppurative process to supersede the adhesive, and by producing speedy destruction of the coagulable lymph effused, prevents the formation of septic walls in which the pus may be contained. Laennec assigns as a reason for this anomaly, for such it evidently is if the observations made by Andral

Laennec and others were correct, that if the disease were sufficiently violent and extensive to lead to the formation of an Abscess by absorption of the pulmonary tissues. Such lesion would be preceded most inevitably by that worst of all results of disease - death. This Presumption seems to us unfortunate. Whether it is more so than our presumption in opposing it without offering a better of our own, must be left to others. Whatever may be the true Cause, the fact is established that this effect of Pneumonia is of infrequent occurrence. Gangrene of the Lungs following Inflammation of the organ is a condition as seldom observed, probably more so than Abscess. Sometimes, however occurring it is distinguished easily by the nauseating fetor of the breath in Expiration, the odour of the breath, while there exists merely purulent infiltration being rarely fetid or very unpleasant in its Character. -

Besides the two forms of the disease already alluded to, others have been described by different Pathologists. By Andrews - the "vesicular" Variety in which the inflammation seems to be Confined to distinct indurated vesicles or Air Cells. By Gerhard the Typhoid form is recognized in Contradistinction to the Acute occurring

in healthy constitutions while the former is associated with an asthenic or typhoid condition of the general system; and lastly, the chronic variety supervening upon the acute in the form of abscess, or of a condition spoken of by some French pathologists as "carnification" in which the lung remains for a length of time in the state hitherto described as that of hepatization — rare, however, in either case, the disease terminating usually in resolution and early recovery, or in death. —

Thus having made enquiry into the pathological anatomy of pneumonia in its uncomplicated form, next to be considered are those means by which we are made acquainted during the life of the patient with the changes that have been spoken of, as they occur during the progress of the disease, which, indeed, constitute the main subject, and what are those means? the most certain of them, most devoid of fallacy to him capable of exercising them and most diagnostic are auscultation and percussion, the institution of which within the past half century has thrown a flood of scientific light upon the diagnosis of pectoral diseases, previously so dependant upon general symptoms, and consequently

obscure, and which, in truth, may be considered as having constituted a new epoch in the history of the medical science. They constitute the medium by which the language of the disease is brought to our senses, which however proves useless to us unless it has been faithfully and carefully studied and is thoroughly understood. The sounds connect to our ear by applying it to the thorax to hear the percussing these tones differ widely in health and in disease, and since it is by comparison alone that we can gain information from these sounds a perfect familiarity with what they teach in a normal condition of these organs is absolutely indispensible to an understanding of the important truths they serve to convey when their language becomes modified by disease

With regard to the sound elicited by percussing the [illegible] it is [illegible] when [illegible] vitalized or suppurating portion of the organ is in [illegible] the [illegible] no sound being intervening, it is invariably dull. And why? In the natural healthy condition of the organ when the air passages to their utmost ramifications are permeable by air, and the vesicular extremities of

those tubes or passages contain a certain proportion of this highly elastic and resonant tissue percussion as would reasonably be expected. Elicits a distinctly clear sound. not when the lung becomes almost consolidated by congestion with fluid which mechanically expels the atmospheric air, usually present in the vesicles. the sound is of a dull, dead character. It is however frequently the case that a part of the parenchymatous substance, capable of exercising its normal functions, unaffected by the changes that belong to this disease, is interposed between the inflamed portion and the wall of the chest at the point where percussion is made. In such a condition the sound produced, though somewhat modified, may still be clear, and percussion so far from indicating the true condition of the organ, and throwing light upon the diagnosis, would be likely to mislead the practitioner. In such cases more particularly, is the aid of immediate auscultation or the application of the ear directly to the surface of the chest, in this manner attending to the patient's breathing, coughing and speaking, required — the means of diagnosis, though as above said particularly important in the cases alluded to, yet

scarcely to be dispensed with in the diagnosis of any affection involving parts contained within the thoracic parietes.

To use, with benefit, immediate auscultation not less than that through the medium of percussion requires an acquaintance with the healthy sound produced by the entrance of air into the lungs and its exit thence in the ordinary process of breathing. That observed when the ear is applied to the surface of the chest, and principally conspicuous, is what has been termed the respiratory murmur, and has been compared to a variety of extraneous sounds, such as the sighing of the wind through the leafless branches of a tree, to the inspiration of one deeply sleeping, etc. This — the respiratory murmur — is made up of several special sounds in accord, each with the others. Either one of which may be heard to predominate over all the others by applying the ear directly over that portion of the breath apparatus to which it principally and specially belongs, — and in which it is produced. The sounds thus acting are the tracheal, the bronchial and vesicular murmurs. The first two are those caused by the passage of air through

The Trachea and large Bronchi, and are of a blowing Character. The last is that produced only in the minute ramifications of the air passages and in their vesicular terminations, principally audible in inspiration.

These, then being the normal sounds of respiration, the question follows, What modifications are heard to take place in this nature when the medium through which they are effected and by which they are conveyed to the Ear, becomes altered by the existence of inflammatory disease, such as that we are considering? In other words, What are the signs of the existence of Pneumonia? in what do they differ from those of health?

The first is that of Small Crepitation or what has been termed the Crepitant râle or the Crackling of Pneumonia, simulating in Character the sound produced by the bursting of a multitude of Squibs, by the rubbing of parchment, or a lock of this hair between the thumb and finger. It occupies that portion of the lung in which there was in a state of health, what we endeavored to describe as the Vesicular Murmur, that is, in the ultimate -

branches of the air tubes. Its production has been by different observers, ascribed to various causes. As to the passage of minute and distinct bubbles of air through liquid contained in the tubes, to the separation of the thickened vesicular walls which have become adherent at certain points by a viscid mucus there present, by the transit of air during the act of inspiration. I cannot, though, be attempt no explanation regarding its mode of production. Consider this sound, when distinctly audible, pathognomonic of the first stage in the progress of Pneumonia.

Next to be considered is that which marks the second stage of the disorder, Bronchial Respiration, a whispering sound similar to that produced by blowing forcibly through a tube of moderate dimensions, whose calibre, to be concise, equals that of a goose quill: This sound which in the healthy state is obscured by the vesicular murmur, now predominates, the natural murmur being destroyed or not produced at all, by the solidification. The lung has undergone obviating or entirely preventing the entrance of air into the organ through.

the smaller tubes, made more manifest also by the better conducting medium presented by the pulmonary tissue in its present solidified state.
Coming with this sound of the breathing, Bronchial voice or what has been termed Bronchophony is heard. 'tis the voice of the patient reflected downward into the still pervious air passages humming or muttering in its character, the words being, as it were muffled, not distinctly articulated and conveyed to the ear of the auscultator.
The two last mentioned sounds are those which characterize the second stage of the disease, that which has been spoken of as the stage of Hepatization, they belong also to the third stage, that of purulent infiltration
At the same time that the morbid sounds spoken of are audible over that portion of the lung affected by Pneumonia, if the ear be applied over some portion still unaffected and healthy a departure from the natural respiratory murmur is observed. "Puerile respiration" as this has been called, is heard, owing to the effort being made by the healthy portion to compensate for the deficiency

of that which is diseased. When in the second stage of Pneumonia, the inflammation is checked in its progress towards suppuration, and resolution is taking place. Such resolution declares itself by a return of the respiration which had ceased in the stage of engorgement, though somewhat modified, it being coarser or rougher in its character.

The morbid sounds given, though in a majority of cases present during the progress of inflammation of the lungs are sometimes absent and not to be detected by the most careful investigation that can be instituted even by the educated Ear. When the inflammation involves only a part of the Parenchyma deeply seated and surrounded on every side by healthy tissue still discharging its function of haematosis, when the air is still entering and departing from healthy lung which is interposed between the exact seat of the disease and the back of the chest upon which the Ear is placed: the signs may be partially or entirely wanting, and the diagnosis of the disorder may be consequently rendered hidden and obscure

In this case, when auscultatory signs are wanting to determine the character of the disease, resort is had to the general symptoms presented during its progress, which generally, prove sufficiently intelligible to guide and govern the treatment proper to be instituted, and most likely to obtain the dissolution which without injudicious remedial agency might result.

The following embodiment of these symptoms as given by Dr Williams is applicable in a large majority of cases where the disease occurs in constitutions not enfeebled by preexisting disorder when in a word it is sthenic in its character and uncomplicated by other modifying circumstances. "Fever, with more or less pain in some part of the chest; accelerated and sometimes oppressed breathing; cough with rusty and rusty-coloured expectoration". Each of which we propose to consider separately. – Preliminary to such consideration however, certain characters that often mark the approach of the disease not invariably but generally presents, are to be spoken of, occurring as they do in the very incipiency of its onset, their study

constitutes an important element in the study of the malady throughout its whole extent.
After several days of lassitude, loss of appetite and restlessness in some cases, while in others without any of these phenomena, rigors alternating with flushes of heat and acceleration of pulse take place, which strongly lead to the presumption that inflammation is being set up in some portion of the organism, the more particularly if the exciting causes of this morbid process are known to have existed, and to have existed in such relation and force as to lead to the probability that their influence had been exerted upon the individual in which these phenomena appear, at some time antecedent to their appearance.
Immediately succeeding these premonitory symptoms, if they may be so denominated, the first, often accompanied by others in an adopted context, reveal to itself — Fever, sympathetic or symptomatic of the local disease set up within the Thorax, which as in all other inflammatory affections invariably manifests itself in an acceleration of the pulse, flushings of the cheeks, injection of the conjunctiva, respiration

great vascular Excitement and local determination of blood. The pulse in the earlier stages of the disease, that is in the active inflammatory stage, is full hard, frequent and forcible in its Character: in the latter stages when there is depression of the powers of life caused by the debilitating nature of the disease, which progresses towards a fatal termination. The pulse becomes quicker weaker & smaller During the Existence of this febrile Excitement, a deranged Condition of other organs is frequently observed the secretions of the Abdominal viscera, as the Kidneys the liver and the glands of the Intestinal Canal are not infrequently perverted, evidenced by scanty and high coloured urine, jaundice and Constipated bowels. The brain, too is sometimes, though more rarely than other organs, sympathetically affected manifested by intolerance of light and sound, and by active delirium. - Delirium however, as we shall have occasion to note when speaking of Dispnœa is frequently dependant upon another and more powerful Cause than that of nervous or Vascular irritation

The pain that sometimes, and indeed, very generally -

accompanies Inflammation of the Lungs is various in intensity, being greatly influenced by the nature of the complications that occur and by the violence of the disorder itself without regard to complications. By some, it is said sometimes to be absent, and in its stead there is a sense of oppression or fullness in the chest not amounting to actual pain. When present it is usually an early symptom. It is most commonly referred by the patient to a portion of the Lungs below the Mammæ, as might be supposed from the fact, which we omitted to notice when speaking of the Anatomical lesions, to which division of our subject it properly belonged, that the inflammation is in a large majority of cases; as is proved by the observations of many American pathologists who have accurately investigated the subject and gathered statistics as testimony in support of the assertion; seated in the inferior lobes of the Lungs and more frequently by far, in the right than in the left division of the organ. — The pain is usually more intense: in the beginning of the malady, gradually relaxing and disappearing before the entire subsidence of the inflammation. It may be exaggerated by any circumstance

having a tendency to distort the perfect quiet of the organ, by changes of position. Cough, forced or even full inspiration, and even by pressure from without if the disease is superficially located, by percussion upon the thoracic walls or by any sudden and violent jarring of the body: Withal, however, the pain that accompanies Pneumonia is far from being an efficient or even a useful diagnostic symptom.

Dyspnoea is more frequently than pain a concomitant of this disorder. Like the latter, it is varying in degree, being easily modified by a variety of circumstances, as by the extent of the solidification consequent upon the inflammation, and by the rapidity with which the disease progresses to produce the changes before spoken of. At times this symptom, when present is slight and not at all distressing, at others it is urgent engrossing the entire attention of the patient, involving an amount of suffering too great to conceive, almost too paroxysmal to be borne, in this extremity. The sufferer frequently and forcibly distends his chest by the action of his respiratory muscles. The veins of his head and neck are swollen &

turgid with blood. his face is purple or livid. the nostrils are widely expanded. while at the same time there is anxiety and concern attached in every feature and movement. - Delirium not unfrequently supervenes. telling upon the inefficiency of the lungs to arterialize and render fit for purposes of life the blood loaded with Carbonic Acid Gas exerting its noxious properties on the brain - when this is the case. restoration to health is an event not to be looked for. recovery being exceedingly rare. Coma or Convulsions closing the scene and with its lifeless drama in the history of the unfortunate Victim

Cough though generally an attendant circumstance is in great measure devoid of interest affording no very useful indication at first day. it is subsequently accompanied by an Expectoration. to which some importance may be justly attached. - the peculiarity in the appearance of which, considered by some. infallible evidence of the presence of Pneumonic inflammation, consists in its Colour. since its viscidity is a property existing in it during the progress of other pulmonary affections. particularly

those involving only the lining mucous membrane of air passages. — The sputa in the early stage of the disorder are simply mucous in their character. After a time, the peculiar appearance spoken of manifests itself. They are now rusty coloured, deriving this property from the minute subdivision and intimate mixture of blood with mucus. — They are extremely viscid adhering closely to the sides and bottom of the vessel into which they are spat. — So firm indeed is this adherence, that though the vessel be inverted and shaken the sputa are not detached from its inner walls, but remain firmly united to those points with which they were previously in relation. As the disease advances, the expectoration sometimes becomes less tenacious, and lastly consists of pus: this last is only seen in the last stage, that of suppuration, and almost unequivocally forewarns dissolution — The peculiar expectoration spoken of, though to be looked for anxiously and carefully to be observed upon its supervention, is not invariably present. — Sometimes being not greater in amount and not differing in quality, than that of simple catarrh, and at other

times not appearing at all or so scant in amount as not to be observed. Nothing has yet been said regarding the decubitus of the patient, which should properly have been considered in connection with Dyspnoea. Some have attached much merit to it as a diagnostic sign. The opinions that have been advanced in reference to it resolve themselves into these simply, that the patient lies either upon his back or on the side affected, the reason being obvious. The sound lung in either of these positions being unembarrassed by superincumbent pressure is enabled to perform not only its own functions but in some degree to supply the deficiency of that which is diseased whose office is entirely prevented by consolidation of its texture and impervousness of its air tubes. — the Dyspnoea being more urgent and distressing usually than the pain accompanying the disorder.

The prognosis of Pneumonia depends upon the extent and violence of the inflammation as indicated by the signs and symptoms, already considered if it progresses to the second stage the chances of recovery are by no means flattering, though resolution

may, still, it is said, take place. While Extension to the third stage is almost necessarily fatal. Great Dyspnoea, Delirium, Excessive viscidity of the sputa in the second, and a watery condition of the expectoration in the third and last stage usher unfavorably. The duration of the disease is various, the average period being about ten days. Its causes are numerous. Cold acts as the most frequent agent in producing Pulmonic inflammation, the disease is sometimes caused by Extension from other affections seated in contiguous parts as in the air-tubes in the form of Bronchitis or in the Pleura as Pleurisy. It is liable to supervene upon the Eruptive diseases - particularly Rubeola, upon the Gouty and Rheumatic inflammations, it may exist and does frequently with tubercular deposits in the Lungs. etc.

Having thus briefly and imperfectly given a history of Pneumonia comprising the changes it tends to produce in the texture of the respiratory apparatus, the means by which its existence is to be detected, its causes and prognosis it becomes as next to consider the operations by which it may be interrupted in its progress, to the relief of the patient and to the prolongation of life. Perhaps in no

other disease so destructive in its tendency, to which the human family is liable, is medical aid more promptly and certainly required, or more happily rendered, than in this. Few yield more readily to the Physician's art when properly exercised, in none does Nature in her efforts at repair call more loudly for aid, and, lastly, few present more certain and reliable indications for the means by which that solicited aid is to be rendered. The agents which have proved most efficient in the treatment and from which all the wished for benefits is to be derived in the active, sthenic form and in the earlier stages of the disease are, "Bloodletting (local and general), Tartarized Antimony, Mercury and Opium. These we propose to consider separately as they have been named, after which to weigh their merits when employed in a state of combination.

First – Bloodletting. On a retrospectant of the Literature of which is almost universally made, the voice of one only, of all the eminent men who have attended to the subject being raised against its use, that one, Louis the noted French pathologist, who by pronouncing it a remedy from the employment of which very little if any good has ever been derived and none should be expected

has in this particular, at least, abused or misused the powerful intellect and consequent influence given him for good.

The assertion being made that Bloodletting is an agent from which much benefit may be derived, and which should never be withheld, unless contraindicated by circumstances hereafter to be noticed; the question arises, In what manner does its exert its beneficial influence over the disease? or, what are the indications for its employment. — The objects to be aimed at in the treatment of inflammation of the lungs, and the same are applicable to similar actions existing in any tissue or portion of the organism, it strikes in its character, are, to lessen the quantity of the circulating fluid in the system, to subdue vascular excitement, and obviate local determination of blood to that part particularly in which the disease has its seat, and upon which afflux and congestion the morbid action depends, and finally to abort the formation of such products of the inflammation as would be likely to impair functional activity, and if possible to accomplish their removal as speedily as possible. Now as we have seen, in the early stages of the disease

we are considering. The lungs, in a portion, at least, of their tissue are in a state of congestion; the blood vessels distributed to them are distended with blood venous in its character from the imperfect supply of atmospheric air – the oxygenating principle, giving rise to the two most prominent and distressing symptoms, Pain and difficulty of respiration or Dyspnoea, to say nothing of the Delirium which sometimes supervenes, which can only be relieved by a removal of the cause that produces them, in a word by removing the Engorgement. – The direct, certain and immediate effect of the abstraction of blood being to diminish the quantity in the system generally and in the various parts of which it is constituted. We are led by reasoning to expect from Bloodletting, the relief of these prominent symptoms and Observation and Experience have proved that the reasoning is well founded. It is the chief Anchor in the treatment, the great Anti-Pneumo phlogistic agent. The rules to be observed in its employment are, to bleed as early as possible, so soon as symptoms are present indicating the onset of the disease, the amount of blood taken must vary to suit the special circumstances of the case, no positive index being applicable Except that afforded

by the pulse and the feelings of the patient. It has been recommended to cause the individual to assume an erect, or if this be not practicable, a semierect posture, and to suffer the blood to flow continuously from a large orifice until a state approaching syncope is induced or until the pulse is sensibly reduced in force fullness and frequency, and the Dyspnoea, if present before, vanishes; this operation to be repeated a second or even a third time if the more urgent symptoms prove so obstinate as to require it. Conjoined with general bleeding, the taking of blood to the skin by means of cups or leeches or both, applied directly over the seat of the inflammation, proves an auxiliary means greatly serviceable in the treatment by directing the flow of blood from the inflamed structure. — If notwithstanding all this, the disease obstinately persists and progresses to the second stage. Bloodletting is scarcely an agent of much avail rather tending, if the patient be enfeebled, as is likely to be the case, to do injury than to procure relief, by debilitating, still further, the powers of the system and producing dangerous debility which is now strenuously to be guarded against. In some instances however, when, with this second stage there is associated fullness of the pulse

and some degree of firmness and vigor of the constitution bleeding may be practised with moderate benefit in arresting and preventing the further extension of the inflammation.

The usherings in of the third stage that of suppuration as surely contraindicates the employment of this means as did the first its non-employment, under no circumstances is it void of the most extreme peril since all the powers of the system are required to abort the vital issue, now actually threatening, it is at this time that the patient may be justly conceived to be suspended between time and eternity when the minutest fraction of the vital force necessary to perfect health and life is forever lost. Every effort to increase and strengthen this power, not to reduce it by bloodletting or other strongly debilitating measures lest he sink irrecoverably.

Next in importance to bloodletting when the disease is in its incipiency is Tartarized Antimony, which from its power in reducing the excited action of the heart and bloodvessels proves of infinite service in inflammatory affections, not less in those of the lungs than of other organs in the system. As a subsidiary

agent its use should never be attempted to be omitted,
Its physiological effect is that of producing vomiting
and sometimes purging if given in doses sufficiently large
to manifest any effect at all. And so in this disease
in a great majority of cases, it produces for a time
these effects, unless counteracted by other agents that
tend to abort them, after its repeated administration
however, the stomach no longer rebelling, tolerance of
the remedy is established, and large doses may be
employed with the certain effect of subduing vas-
cular excitement without the distressing useless and
indeed injurious effects before alluded to, by vomiting
It is from this depressing property of the drug that
its use has been attended with such beneficial influ=
ence, and has been so highly lauded by most members
of the profession.

Mercury, an agent perhaps more extensively employed
by the medical man than any other in the Materia
Medica is far from being useless in the treatment of
Pneumonia. Small doses frequently repeated until Ptya-
alism is produced in the great and most particularly
in the second stage of the malady prove markedly and
eminently beneficial by causing dedation, by diminishing

the effusion of vegetable in parts, and by promoting the absorption of that already effused, which if suffered to remain would most likely injure the texture of the organ and embarrass greatly and permanently its functions.

Opium "per se" can be of but little value and indeed may prove injurious in Pneumonia its proximate effects being that of a stimulant to the vascular system. When used however in doses sufficiently large to produce its sedative properties, to keep down the excitement already reduced by venesection and to allay irritation and pain if pain be present, its place can be supplied by no other known drug.

These then are the remedies mostly to be relied on, viz Bloodletting, Tartar Emetic, Mercury and Opium. We have seen that they, individually, tend to exert a curative influence over the disease, but they may with great advantage be employed at the same time, or in combination since these at least of them are therapeutically compatible, all tending to a greater or less degree to repress the excited energy of the circulating system upon which the inflammatory nature of the disease depends, and to which it is principally due.

here prove advantageous. In the latter part of the second stage and during the third when the system has become debilitated by the disease itself and the measures employed to arrest it, recourse must be had to the use of stimulants, antispasmodics, counter irritation &c. — Unfortunately however at this period the fatal issue is inevitable, and death closes the scene —.

An
Inaugural Dissertation
On

Lumbar Abscess.

Submitted to the consideration
of the
Board of Trustees
of the
University of Maryland,
for
the Degree of
Doctor of Medicine.
by
George Gaston Brown
of
Maryland.

[illegible]

[illegible] of the [illegible]

[illegible] requirement in [illegible]

[illegible] without being [illegible]

[illegible] of the plants.

[illegible]

[illegible] side or it may be doubtful whether [illegible]

[illegible] are attended with some [illegible]

[illegible] in all seasons but [illegible]

only in winter, and this seems to [illegible]

[illegible] side of better than the [illegible].

[illegible]

[illegible] a particular point of [illegible]

... position ...
with the accumulation ...

... taken ...

... fluid, ...
arteries, are ... and ...

and having an ... over, ...
it is without ... of ...
... made in the ... The ...
... and easily broken up, or ...
... the ...

... great the lung may be found com-
... as small as the hand, and ...

... by adhesions but when the ...

... and ... in the ...

[illegible] the [illegible] [illegible]
[illegible] the [illegible] [illegible]
[illegible] the opposite side. [illegible]
[illegible]
[illegible]
[illegible] appearance of [illegible]
[illegible] plains;

Acute pleurisy generally commen[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible] quently decreases [illegible]
[illegible]
[illegible]
[illegible] however when the pain is [illegible]
[illegible] contracted, — the cough is [illegible]
[illegible] dry, but sometimes attended with ex[illegible]
[illegible] of pretty mucus, at other, it
[illegible]
[illegible] ration, [illegible] the [illegible]
[illegible] rather [illegible] and quick, [illegible] The

[illegible]

this position is [illegible]

[illegible] consequence [illegible]

[illegible]

[illegible] in the early stage by applying the ear [illegible]

[illegible] sound is heard, caused by the [illegible]

[illegible] each inspiration — sometimes it [illegible] slight and can hardly be heard, at [illegible] very loud and distinct — This sound is [illegible]

[illegible] fusion takes place; it is [illegible] able sign [illegible] is called [illegible] that in those cases not all [illegible] physician. The respiratory [illegible]

[illegible]

[illegible]

[illegible] ing, in respiration, [illegible] ing, but in the heaving [illegible] [illegible] when there is [illegible]

[illegible] dilatation becomes [illegible] that modification [illegible]

[illegible] the side becomes rounder, the ribs [illegible] passing up or bulging out [illegible] the level of the ribs — this may be [illegible]

on the right side or in the

when the effusion is very great

may be pronounced

[illegible] pleurisy [illegible]
[illegible] it becomes chronic.

[illegible]
case; the symptoms are [illegible]

and wet or sudden changes of temperature
are caused by mechanical injury

[illegible]

[illegible] respiration

[illegible] both, but prominent [illegible]

[illegible] even when there is [illegible]

[illegible] yields a dull sound in [illegible]

[illegible]

[illegible]

[illegible] complicated [illegible] of luminous [illegible]

[illegible] would both sides be affected, [illegible]

[illegible] by the [illegible]

[illegible] the [illegible]

[illegible] [illegible] [illegible]

... or limits, or any ...

... be rheumatic ... pain ...

... in healthy persons ...

... rheumatic ... the pains ...

... both patients ... tongue ...

... treatment.

...

...

...

...

... and unless after a ... there is ... decided impression made on the pain ... in abatement of the pain ... should be repeated but generally after ...

...

...

...

... pain ...

...

After

[illegible] to the bowels have [illegible]
[illegible] necessary to keep them open by [illegible]
[illegible] the [illegible] — [illegible]
[illegible] combined with [illegible]
[illegible] the tartrate of antimony [illegible]
[illegible] two or three hours. [illegible]
[illegible] or the Dover powder should be
[illegible] pain and promote sleep.
[illegible] the [illegible] pain [illegible]
[illegible] blister applied over the epigastrium
[illegible] afford great relief. Apply [illegible]
[illegible] when troublesome. [illegible]
[illegible] slow or rapid, it proves to
[illegible] effect of [illegible] should be

[illegible]

[illegible] would [illegible] combine with

[illegible] to prevent decomposition [illegible]

[illegible] called blisters. Mercury is [illegible]

[illegible] and should be administered [illegible]

[illegible] made on the system, [illegible]

[illegible] the precipitation [illegible]

[illegible] be resorted to, as [illegible]

[illegible]

[illegible] of potassium, nitrate of potash [illegible]

[illegible] prevent the flow of

[illegible]

[illegible] have been recovered, and in some

[illegible] absorption seems to take place from the

[illegible] application of a blister.

Quinine should be employed [illegible]

[illegible] hydrocyanic acid [illegible]

stants and tonics should be given. The diet

[illegible] tea, toast &c. Great care should be taken

[illegible] expose the patient to cold or damp air,

[illegible] should be warm and the patient kept

[illegible]

[illegible] of Chronic Bleeding.

In chronic

[illegible] mucous membrane bleeding is seldom

[illegible], when the loss of blood is indicated

[illegible] bleeding by leeches or cupping [illegible]

[illegible] we are guided by the amount of [illegible]

[illegible]

a vesicle, bound and [illegible]

to promote absorption of the [illegible]

[illegible]

and hectic fever appear, [illegible]

[illegible]

[illegible] the sinus [illegible] is [illegible]

in these cases,

[illegible] removed,

[illegible] and the effusion still remains [illegible]

[illegible]

[illegible]

[illegible] an opening in the thoracic parietes.

[illegible] paper [illegible]

[illegible] remove the [illegible]

[illegible]

[illegible] the operation [illegible]

[illegible]

[illegible] the fifth and sixth ribs, [illegible]

[illegible] where the abscess is to be found, this
[illegible] assumes an opinion opinion
[illegible] as to its quality, whether serious or
[illegible] has been discussed whether the adhesion
[illegible] which the opening is hereafter to exist
[illegible] that it prevents the lung from expanding,
[illegible] the pleura, and causes the opinion
[illegible] purulent and pelled; others advise
[illegible] the orifice be left open, that the lung
[illegible] as soon as formed — most will agree
[illegible] that [illegible] opinion is serious in other
[illegible] excluded, for their purpose but
[illegible]

[illegible]

[illegible] correspond with that in the pneumo-

[illegible] caution is taken to take care that the

[illegible] method is to connect both the bowl

[illegible] and into this the fluid flows and

[illegible] operating we find the expansion tube

[illegible] if air should be admitted, care

[illegible] so the orifice should be left open to

[illegible] with the fluid in consequence

[illegible] becomes of an offensive smell, and

[illegible] liquids or solutions of chloride of zinc

[illegible] may be injected into the vaults.

[illegible] and

[illegible] will continue, and in a

[illegible] the fluid remaining behind

[illegible] times, and this appearing on [illegible]
[illegible] remedy, the [illegible] operation in nothing
[illegible] suggested, and [illegible] first in [illegible]
[illegible] to that [illegible] for the [illegible]
[illegible] The fluid is drawn off [illegible] through
[illegible] canular through an obtuse opening [illegible]
[illegible] conditions of Sodium injected in the [illegible]
[illegible] [illegible]

[illegible] As far as we know, Sir Cooper
[illegible] was operated on, of those five [illegible]
[illegible], in one of which there operations in the
[illegible] [illegible]
[illegible] [illegible] to have only changed the condition
[illegible] secreting membrane, as the other [illegible]
[illegible] at size and shape, in the other
[illegible] [illegible]
[illegible] with contracted cheats, [illegible]
[illegible] case that we know of, has been operated
[illegible] [illegible] that of the other of [illegible]

[illegible] also proved successful,

[illegible] insufficient

[illegible] of time has elapsed, nor the opinion

[illegible] sufficiently often pronounced, [illegible] merits, but [illegible] necessary

[illegible] case in which it has been tried, we

[illegible] indulge the hope that it will [illegible]

[illegible] of [illegible] to [illegible]

[illegible] of disease which has hitherto been

[illegible] the Conqueror.

Inaugural Dissertation

on

Scarlet Fever.

Submitted for examination
of the Provost, Regents & Faculty of Medicine
of the
University of Maryland
for the
Degree of Doctor of Medicine.

by

Francis L. Dawson,
Cecil County
Maryland.

February 14th
1850.

Scarlet Fever.

"This is a contagious febrile disease, characterized by inflammation of the fauces and a scarlet rash, appearing usually on the second day, and ending in desquamation about the sixth or seventh."

Although Scarlet fever was for a long time confounded with measles, a disease which it resembles in many respects, it is now known as one, distinct and separate, and of a more decided character and uncertain nature. Rarely indeed is there any epidemic more in its course and terminations than this disease. It may be so mild as scarcely to arrest the attention, or it may be of the highest degree of virulence. A person may be attacked with all the symptoms, from which there is little or no danger apprehended, or one may, not unfrequently, assume the most malig-

[illegible] and [illegible] the [illegible] convalescent may be followed by secondary inflammations that give much trouble, and [illegible] the [illegible] may [illegible] at any period of the year to [illegible] either [illegible] or [illegible]; but happily as a general rule, like all contagious diseases, it attacks the same individual, more than once. It is a disease almost wholly confined to children, only occurring in persons of mature age, the susceptibility to its [illegible], and the pathologic [illegible] from [illegible] [illegible], the period of incubation may [illegible] from [illegible] days to two weeks. The general period is about four or five days; commencing either with or without the [illegible], [illegible] occurring usually in exanthematous form, such as [illegible], languor, weariness, and pains in the back and limbs. The [illegible] with the [illegible] of the [illegible], [illegible] and [illegible] [illegible] and [illegible] [illegible] [illegible]

nausea and vomiting, and severe head-ache; at times delirium and, in some few cases convulsions. Accompanying the [illegible] there is always more or less inflammation of the fauces (which is accompanied with [illegible]) the tonsils become [illegible] and the whole interior of the mouth; and the tongue [illegible] is red at the tip and edges, with projecting red papillae [illegible]. Usually on the second day of the fever the rash appears; though in some cases it may [illegible] earlier, and in others later; as for instance, in some of the worst forms of the disease, it may be deferred until the third or fourth day. First it [illegible] about the neck, then the face and chest, and finally it spreads [illegible] over the [illegible] surface, requiring [illegible] twenty four hours thus to diffuse itself, being of a more [illegible] at the flexures of the joints, than at any other part

of the body. It is not known [illegible]. The [illegible] [illegible] the [illegible] [illegible], [illegible] [illegible] [illegible] in a few scattered [illegible] or [illegible]. The [illegible] is of a bright red or scarlet, which upon pressure may be made to disappear by [illegible]. [illegible] [illegible] [illegible] the pulse is [illegible], and is increased by [illegible] [illegible] the general excitement, and returns again to its natural [illegible] [illegible] the [illegible] cases [illegible]. The tongue is generally at first smooth, in some cases rough, in consequence of the [illegible] of the papillæ. The skin is dry and [illegible] to the pulse, full and [illegible], frequent, [illegible] at times as high as one hundred and thirty in proportion to the [illegible]. The appearance of the rash seems to have no influence whatever upon the fever, but which continues [illegible] the [illegible] of the disease, with but slight exacerbations, occurring generally towards evening.

which are occasionally attended with out-
[illegible] in delirium and in some cases
with appetite [illegible] in the
advanced stages, we may have diarrhoea
setting in, and some signs of the bowels will
be constipated. The pulse in some
cases may be very mild throughout the
whole course of the disease, whilst in others,
it may become [illegible] and
[illegible] [illegible]
[illegible] and [illegible] in [illegible]
depletion and [illegible] the [illegible]
medicine.

The duration of convalescence, is [illegible]
from six to [illegible] days in [illegible] cases, [illegible]
[illegible] the symptoms all begin to decline,
the pulse becomes slower and fuller, the
[illegible] becomes [illegible], the
[illegible] falls, the [illegible] of the [illegible]
[illegible], and the [illegible] [illegible]
[illegible] off and for, it does so not, leaving
it often remain for a long time red and
[illegible], with the [illegible] [illegible], [illegible]

Leaving the scene, then, is often a free perspiration occurring which may be looked upon as rather an unfavorable symptom. Next follows desquamation, beginning as soon as the eruption has disappeared, a sensation, lasting three or four days, disappears, and it is ushered with more or less irritation, and the throat, if the seat, is accompanied by restlessness and rather painful. It is usually accompanied with the peculiar odor which and the skin of the hands and the soles of the feet where it may come off in large pieces. This process, of exfoliation, is generally accomplished in three or four days from the time it commences, unless there is a succession of it, which will consequently require a longer time; in very mild cases it is accomplished in a shorter period. The patient may now be considered as well, though not so quite free from the unpleasant and dangerous symptoms or disease which are so apt to follow. The convalescence

signs which occur during the course of the fever, as evidences of fatal termination are — a sudden retrocession of the eruption, its late appearance, when it is of a livid or purple color; a third appearance of the eruption with [illegible] the [illegible], in delirium, coma, paralysis and convulsions; pseudomembranous exudations forming in the fauces and [illegible] in the [illegible] of the extremities, and pain that [illegible] or [illegible] [illegible], and muscular weakness, not all of these [illegible], occurring in the same case.

[illegible] the [illegible] idea of the disease, it will be remembered it is known by three varieties, — the simple, malignant, and [illegible] each [illegible] separately, with the symptoms occurring in each [illegible] and the [illegible] are known.

Scarlatina Simplex. — This variety is for the most part [illegible] to its mildness and almost entire absence

of the throat affection. The first sym-
-ptom that attracts the attention, is the appear-
-ance of a pale scarlet rash upon the face
and neck, which is attended with a
slight degree of febrile movement, and declines
again in the course of a few days. In
cases in which the symptoms are more
severe, the rash becomes more widely
diffused, and of a deeper colour. The pulse
may become frequent; the tongue covered
with a pale yellow coat; the skin hot;
and sometimes the eyes, cheeks, and
forehead, at the commencement, are
much more prominent. This is rarely
ending in death, unless some complication
occur, which may cause it to terminate
fatally, otherwise there is but little danger
to the patient, but nevertheless, it should
be carefully watched

Scarlatina anginosa.— The most prominent
symptom in this form of the disease is
the throat affection, with also greater
severity in every respect than the simple.

stiffness of the jaws, soreness of the throat, with slight pain and swelling are often in evidence early in the attack, and which increase as the disease advances. The eruption may not come until the day instead of the second, nor is it as regularly spread over the surface of the body as in the simple form, but seems to distinct patches, leaving the intervening portion of the skin of its natural colour. It may thus, frequently occur, covering the whole surface as extensively as in the simple variety. The fever is higher, the pulse more frequent, and a greater tendency to delirium, and convulsions. If after the disease has advanced for several days, the fauces be examined, the tonsils will be found to be of a deep red colour and swollen, and upon the former there will be observed patches of a somewhat peculiar appearance, being of a dirty white or yellowish colour, some-

Tissues covering the whole surface of the pharynx, and extending down into the larynx as far as can be seen. They are commonly white, and sometimes loose, so that they may be scraped off with but little difficulty, leaving the surface red and smooth, and occasionally causing in leaving to the breath a very offensive odor. Accompanying this morbid process of the throat, there is generally much swelling of the mucous membrane, so as to bring back and narrow, and extending to the internal nasal cavities, fullness and difficult respiration, and occasionally interfering with the free breathing. There is also, a secretion of viscid mucus, which gives the patient much trouble on account of its being used to discharge from the mouth, or to swallow. The mucous membranes of the nostrils not unfrequently partake of the disease, and the nasal passages become closed by swelling and crusts which form within them, causing the patient to

breathe with difficulty. [illegible]
[illegible] is in a condition
[illegible] and [illegible]
[illegible] them, which is often so severe as
to excoriate the mouth and throat. The
tongue is often so much swollen as
[illegible] the mouth and throat, or slightly
reddened, with a deep red appearance
and large projecting papillae. The mucous
[illegible] in this form of the disease is
[illegible] in the mouth; the throat and soft
palate become [illegible] and
sometimes after the commencement of
the amation, the parts become clean
either by absorption or sloughing of the
patches, leaving the surface red, and some-
times there is not much [illegible] in the
[illegible]
[illegible] to
[illegible] termination, as well as adds much to its
danger. Although this form of scarlet
fever is apt to prove fatal, yet with good

and under treatment the majority of cases will get well after a longer or shorter time.

Scarlatina Malignant.— Cases of scarlatina in which the symptoms, manifest during the whole course of the disease, are those of a severe and fatal character, usually ushered in by the usual symptoms, a fever coming on early in the disease and malignant. The symptoms by which this variety is diagnosed, are those of the most violent form. Great severity of the initial pains in the head and extremities; the eruption being more dark, becoming out upon the surface, than in either of the other forms, appearing and receding with the truth day, now with a clear atmosphere the rash, is usually intensified with fever; the throat frequent there is the pain, redness, and a deeper redness of the fauces, the disease advances and other symptoms are added. The skin becomes dry, in

[illegible] place and hot in another; the pulse [illegible] the [illegible] upon the teeth and lips; the exhalations [illegible] tion; the breath becomes fetid; exhausting diarrhœa [illegible] from some of the mucous surfaces; collapse takes place with cold clammy skin, fluttering pulse, sunken features, and involuntary stools, causing death, if this be its termination, which in all probability [illegible] days. [illegible] causing death on the second or third day.

<u>Diagnosis.</u> — In the early stages of scarlet [illegible] ence, it is almost impossible to make a [illegible] disease. The appearance of the rash upon the second day. The [illegible] the pulse, and the [illegible]

the principal diagnostic symptoms, from which the disease is distinguished. It bears the greatest resemblance among all fevers, it may be known by the rash appearing on the second or third day, its peculiar bright red colour, its greater uniformity and smoothness; and by the eruption appearing first on the neck, by the redness of the throat, the white tongue, and the mildness of the disease, in the latter disease.

Sequelæ. Few diseases have a greater number of evils following than scarlet fever. The most common among them are,—diseases arising from the parotid and submaxillary glands; discharges of pus from the ear, caused by acrimony passing into the meatus from causing destruction of the drum of the ear; bone-pain, deafness; dropsy; anasarca; encephalitis, and, occasionally, mania; but the most common is dropsy. This may occur in the form of ascites, hydro-

Tumor, or hydrocele, accounts for the
however the most frequent, the other forms
occurring but rarely.

Anatomical changes. After a time the
patient has only to complain of a mass
there can be no anatomical changes
found. But if the disease be continued
or if a return of the disease, in some
cases there will be an inflammation of the
[illegible] of the testis, in others they disappear
entirely; the redness of the tunica in the
[illegible] in some it is scarcely distinguishable. If the
skin be cut into, the vesicular tissue will
expand to the [illegible] and the [illegible]
[illegible] of the [illegible] of the [illegible] are
[illegible], and slightly inflamed, which is
most clearly when the [illegible]
small.

Treatment. — In most cases little or no
treatment is required, more than to keep the
bowels open, give cooling drinks, regulate the
diet, and [illegible] the [illegible] to

and of a contagious nature. It would be well if the case be seen early, and during that its course will be, to give an emetic of ipecacuanha or tart. antimony, with the design of modifying its course. Should these remedies do no good they can do but little harm, therefore it would be justifiable to give them, and should they do no improvement, then should be followed by a [illegible] of castor oil, or a dose of oil if it fail to operate in six or eight hours, afterwards the bowels should be kept open. If diarrhoea occur, castor oil with Laudanum should be given; great care should be taken in all cases to prevent an [illegible] in cases where there is [illegible] inflammation accompanying the disease, as in the anginose variety, local bleeding may be employed with [illegible] benefit; the use of [illegible] may be of most advantage when the throat is much swelled, or [illegible] behind the [illegible] the

tendency to convulsions occurring in the early
stage, when there is but little heat, cold applications should be made use of, taking care
not to let the patient cool, by removing the heat the skin, it also reduces
the frequency of the pulse, and quiets the
nerves; but should the patient be chilly,
it should by no means be used, as it would
do the patient much harm instead, of
good, when the pulse is fully set up, in-
ternal stimulants should be used, such
as wine, water and ice, allowing the patient
to drink often but not much at a time.
Solution of carbonate of ammonia, mixture or
spirit of ammonia, with neutral mixture
may be given three or four times during the
day, in either of which tartar emetic may
be added if the stomach be not sick, if
the stomach be irritable the following
draught, in the last case that occurred, is,
Sweet nitre, syrup of squill, camphor water,
wine of spirits of nitre or Hoffman's anodyne may
be added with benefit to the symptoms of

debility, one or the other should be combated by tonics or stimulants. Nervous symptoms by camphor, assafœtida or valerian. The diet should consist of animal broths or jellies. The time should be paid to the eruption, which so it appears but sparingly, or retrocedes, is aimed to possible to bring it to the surface, by means of the hot bath and rubifacients. The local remedies in this disease are abundant, calcine, acidulated or slightly astringent, applied over the face by injection of capsicum, sulphate of zinc, or nitrate of silver to the pharynx and into the larynx particularly if the patient aims to descend into the larynx; and poultices to the external cavity. During convalescence the bowels should be kept open, the wind warded and if the patient be weak and much debilitated quinine or the simple bitters may be given, with proper diet. The sequelæ should be treated as they occur, if the ears about the neck swell, rubifacients, poultices should be applied, and the [illegible]

by nutritious food and tonics, [illegible]
from the ear. By an injection of [illegible]
acetate of lead, and the dilute [illegible],
[illegible] as [illegible]

[illegible]
hypodermic medicines recommended [illegible]
[illegible] is the most reliable, if abundance
can be placed in any. The great object should
be [illegible], to keep children as far as possible
from the source of infection, as this
is perhaps the only way to avoid an attack.
If there be any, a susceptibility diminishes
[illegible] [illegible].

An Inaugural Dissertation

on

Intermittent Fever

Submitted to the Provost, Regents and Faculty of Physic

of

The University of Maryland

for the degree of

Doctor of Medicine

by

Laurence J. A. McCauley

of

Maryland.

Baltimore, 14th. February 1856.

is either idiopathic [illegible]

[illegible] that the [illegible] practical medicine is little [illegible]
[illegible] a [illegible] doctrines which have risen, and such
[illegible] men [illegible] them. Here it is that [illegible]
[illegible] been lured to their utmost power and [illegible]
[illegible] has [illegible] in her [illegible]

[illegible] and a source of wonder that physicians [illegible]
[illegible] all time, [illegible] so much [illegible]
the investigation of fevers seeing that the [illegible]
the cause of typhus so far exploding in a third.
the most [illegible] of fevers the idiopathic.

these [illegible] [illegible]

[illegible] observation, but [illegible]

[illegible]

Intermittent fever is a disease [illegible]
[illegible] [illegible] [illegible]

[illegible]

[illegible]

[illegible] intermittent [illegible]

[illegible] frequent [illegible] and [illegible]

[illegible] the symptoms commenced [illegible] the

[illegible] time. The patient is attacked [illegible]

[illegible] character. He begins to feel [illegible]

[illegible] shivering, followed with [illegible]

[illegible] rapidly over the body; the blood also at this time

[illegible] time the surface becomes, thereby [illegible]

[illegible] a state which is called [illegible]

[illegible] is sometimes thrown into such a state [illegible]

[illegible] only just sufficient to keep life [illegible]

[illegible] shivering in a exhausted condition. [illegible]

[illegible] the respiration is hurried, and the [illegible]

[illegible] rapidly avoided. He now enters the second stage of the disease

[illegible] continue, a

[illegible] minutes only, or for four or five hours.

[illegible] literally time however, the chilliness and [illegible]

the body of the patient; and so the [illegible]
[illegible] pari passu until the natural warmth of it will be [illegible]
But the reaction does not stop here; it passes beyond the healthy standard. The second stage now begins. The face becomes full and flushed, the skin hot and burning, and the pulse full and frequent; the urine scanty, and high colored; the tongue [illegible] and [illegible] is [illegible] and [illegible] by inflammation.

At length the third, and last stage arrives. The skin which had become hot, dry, and harsh, now regains its natural softness; a moisture first makes its appearance upon the face and neck, and presently copious and universal sweat breaks forth, which greatly relieves the patient. The tongue becomes moist, the pulse reduced in frequency, the urine regains its natural quality, the pains [illegible] a little [illegible] [illegible] abscesses, and the patient is as well, or nearly so as ever.

Such are the phenomena of a paroxysm of intermittent fever, as it is met with in this climate. The earlier symptoms are those of general debility, and a depressed state of the nervous system. The sighing, yawning, and stretching, are all indications of this. The reason why we should have that peculiar pucker and [illegible] of the skin in the second stage

becomes evident when we reflect, that the part terminating the belly of the hair cannot contract to so great an extent, as the rest of the surface. The engaged convolutions of the intermediate blood vessels [illegible] [illegible] at all, a frequent [illegible].

[illegible] the [illegible] same hour, it is called a quotidian ague. When it occurs at the same hour every other day it is called a tertian. In the same way when a paroxysm occurs after every two days, it is termed a quartan intermittent.

Each of the three [illegible] in particular is, that the paroxysms of the quotidian begin in the morning; those of the tertian at noon; those of the quartan in the afternoon. This is the general rule [illegible] the [illegible]. Then the paroxysms of the diseases [illegible] half in the duration of their paroxysms; those of the quotidian lasting from ten to twelve hours; those of the tertian [illegible] to eight hours and [illegible] from four to six hours. The quartan has the greatest interval, shortest paroxysm, but the longest cold stage, and the quotidian has the longest paroxysm, shortest [illegible], and the least intervals. There are other modifications of these

[illegible] of the tertian and quartan. In instances a paroxysm may daily occur, and yet not be of the quotidian, but of the tertian type. The fits of succeeding days will differ from each other in duration and severity, but those of alternate days will exactly resemble. This form of the fever is called double tertian. There is still another variety of the tertian in which there are two paroxysms in the same day, [illegible] the fits returning only every other day: this is known as the duplicated tertian. [illegible] double and duplicated quartans.

Having briefly alluded to the periods of the day, at which the paroxysms [illegible] it is worth while to [illegible] that, when the disease is about to depart, it is observed that they come on later than usual. It is said that the [illegible] it is deemed [illegible] when the paroxysms [illegible] anticipate; and it is judged an unfavorable sign. The intermittents of every form are subject to marked modifications in regard to their general character, and as such cases have [illegible] it will be [illegible] to consider them. Thus they [illegible] highly malignant, inflammatory, [illegible].

The symptoms [illegible] succeeded by a powerful reaction, a full, bounding, and resisting pulse, intense heat, burning skin, and a dry brown tongue. The aggression is not complete, no matter how profuse the sweating may have been [illegible] stage. The still enormous excitement of the pulse, thirst, and unnatural warmth of the skin.

[illegible] are not of frequent occurrence in this latitude; but in [illegible] not infrequently happen. [illegible] fluid perspiration [illegible] petechiæ, small and rapid pulse, and other signs of great prostration.

The average duration of an attack of intermittent fever is not easily estimated. If persons who were labouring under it could at once be removed from the influence of its exciting cause, and the disease permitted to run its own course, its duration might be approximately [illegible]. Sometimes it may [illegible] a few days, or it may be protracted almost indefinitely.

Intermittents most commonly occur in the spring and

autumn. Thus in [illegible] autumnal fevers [illegible] paribus, the autumnal are the severer, and [illegible] more dangerous of the two. They are of more frequent occurrence too than the vernal. It is [illegible] that, in speaking of the [illegible] months, we should include south of June, says:

"Tempus per autumnum novum,
[illegible] autumnus nuncupo."

The epidemic of cholera infantum, is a malady from which age gives no immunity. The tender babe, and [illegible] age, are equally its subjects, [illegible] its exciting cause. It is stated also, that the fœtus in utero is not even exempted from its influence. And, indeed, it is well known that [illegible] is liable to many diseases, viz. to pulmonary tubercles, hydrocephalus, small pox, &c.; and there can be no reason why we should deny the possible occurrence in the fœtus of the present malady, which depends, in its origin, upon such a powerful and pervading poison. This leads us to another [illegible] of [illegible] relatively, to the consideration of the predisposing and exciting causes of the disease.

[illegible]

a strong predisposing cause. Disease in any f[illegible] intemperance, and its long train [illegible] sufferers accompanied by bad, and insufficient [illegible] [illegible] the system [illegible] susceptible of the malaria when exposed to its great and powerful exciting cause. But, like a [illegible] tion, a former attack of the disease, still, partly predisposes the system for a second.

This fever also stamps, more or less, its own character upon all diseases which occur in persons who have had the misfortune to have been its victim. Such diseases, if I may be allowed the expression, I oppose in a malarious diathesis, and the treatment is required to be modified accordingly.

[illegible] fever, and without which it would never occur, consists in certain invisible effluvia, or emanations from the earth's surface, which are known as marsh miasmata, or malaria. This miasm abounds in low marshy places, swamps, fens, and along the borders of rivers whose sides are not constantly washed by their waters. It is a generated [illegible] chemist has hitherto been able to analyze it.

not having microscope, have powerful screen, [illegible] to give any assistance in distinguishing it from the surrounding atmosphere.

[illegible] reason [illegible] reference to the ancient [illegible] practice. They personified it under the emblem of a [illegible] forest monster whose [illegible] influence was so severely exercised over the luxuriant [illegible] of Argolis. [illegible] the present [illegible] of [illegible] of [illegible] [illegible] tell us amongst many other marshes [illegible] the extensive Lernean marshes, and the drying up this abundant source of pestiferous emanations.

Three things are required for the decomposition of vegetable matters from which malaria emanates, viz. a sufficiently high temperature and a certain degree of moisture. As regards the former [illegible] at which it is most readily set free. Below this point it is not with, but in no great strength. The gravity of the disease also depends upon the greater or lesser [illegible] of the miasm evolved.

Still moisture is necessary for the production of

marsh miasm, is proved by marshy places being rendered healthy by cultivation and draining. A great deal of moisture, however, is required; for [illegible] will never give forth but little of this effluvia. It is that marshy districts are made comparatively healthy by [illegible].

The effects of cultivation and population will be [illegible] illustrated by two extracts, contained in Dr. Watson's valuable work, the one from Dr. Craigie, the other from Bishop Heber, which I judge worthy of an insertion. The former gentleman states, "That East Lothian, in Scotland, was at one time as productive of malaria, that it was quite an expected thing that the reapers in harvest should be attacked with ague: but that now, in consequence of the perfect tillage, and the numerous hedge-rows with which the country is covered, that disease is quite unknown there."

The Bishop's testimony is no less conclusive in regard to the effects of [illegible] on the great benefits derived from cultivation. He says, "At the foot of the lowest hills, a long black [illegible] might well have been drawn with ink and ruler. All

is the first, from which we are still removed several
days, though the country already begins to partake
of its unhealthiness. It was not till the last
[illegible] years, that [illegible] the last
fifteen years. [illegible] the soldiers and servants of the Police Hanna
[illegible] effect that [illegible] establishment was large and healthy, [illegible]
habited all the year through, without dangerous
disease. The unfavorable change is imputed by the
natives themselves to depopulation. The [illegible]
[illegible] of these countries arose from the invasion of
[illegible] 1818. The [illegible] Pergunnahs, and the population, not [illegible]
has never recovered itself."

[illegible] miasm is capable of being carried from place
to place by currents of wind. Thus we find persons
[illegible] on the leeward side of [illegible]
with the fever, while those of the [illegible]
enjoy a comparative immunity [illegible]
[illegible] those the only facts of which [illegible]
[illegible] will [illegible] to [illegible] of all [illegible]
gives us no assistance in analyzing it, and the mi

miasma does not consist in distinguishing it from the surrounding atmosphere; yet experience and careful observation have made known certain of its qualities. It is thus that we know it to be greater specific gravity than atmospheric air. Hence it is that persons sleeping in elevated chambers, are less liable to be attacked by the disease, than those that are lodged upon the ground floor.

Again, we know that this pestiferous effluvium is connected in its cause, by whatever is capable of arresting aqueous vapor. For instance, the [illegible] of fences, elevated hill, a hedge of [illegible]. A place previously exempt from the malady, being protected by a forest, or hedge, may become [illegible] by the hedge or forest being cut away. Indeed, such facts are recorded. Thus a convent situated on a Monte di Gentile, near the village of Sant Stephano, was for a long time [illegible] while it was surrounded, were cut away, it became extremely sickly.

Concerning the periodicity of the pernicious variety, [illegible] more explanations have been attempted

[illegible] to [illegible] satisfactory. Having refused, with the symptoms [illegible] of the varieties and causes of the disease, I will next take up its treatment.

The treatment of intermittent fever needs no [illegible] that which is proper during the paroxysm, and the relief is to be sought during the intermission.

In the fever such as met with in this [illegible] the only treatment that is in general use, [illegible] of the keeping of the patient during the cold stage in bed, allowing him warm drinks, such as gruel, barley water, and warm tisane, applying at the same time, warm bricks, or what is better, [illegible] containing hot water, to the feet.

During the hot stage the bed clothes are [illegible] lightened, and the body of the patient [illegible] with a sponge with cold water. If the cold happens to be well marked inflammatory symptoms present, the lancet is to be used. The sweating stage needs but little attention. It should be promoted by a cool [illegible] drinks, diluents, and potions. When it has ceased

proper to assist it, the patient's body should be carefully dried by means of towels.

Among the many remedies recommended for alleviating the cold stage, upon which the issue of the malady mostly depends, opium and its preparations stand [illegible]. In the very incipiency of this stage, injects a few minutes previous to the expected fit, given in a large dose, will be followed by the best effects.

Emetics may also be employed with advantage at the period when opium may be given with benefit if there be much irritation and excess secretion of the stomach.

Blood letting has been highly recommended, as a potent remedy in cutting short the cold stage, but it is inadmissible in intermittent fever, unless [illegible]. In some cases however, it may [illegible] be [illegible], but [illegible] do [illegible]. Should it [illegible] be of service in [illegible] of a highly inflammatory [illegible] and in these cases, [illegible] of the [illegible] people [illegible] safe [illegible] is that it has been slightly used, and [illegible]

[illegible] properties in common [illegible]
[illegible] the type [illegible] [illegible]
[illegible] to an extent.

[illegible] from the judicious, and well directed employment of remedies during the paroxysm; universal experience points to the intermission, as the period in which we are to look for the accomplishment of the cure of the disease.

As intermittent fever depends upon a specific gaseous effluvium for its origin, so we have a remedy, [illegible] and which has proved itself a [illegible] antidote in the disease. It [illegible] the appellation of the specific antidote is Peruvian bark, and its active ingredients the sulphates of cinchonia and quinine. The only necessary preparation for the introduction of this [illegible] remedy into the system, is the existence of the malady. It may, however, be proper, and indeed it is in general advisable [illegible] a dose of [illegible] purgative before commencing the employment of this heroic drug. [illegible]

[illegible] gamboge, with fifty or ten grains of pulv. aloes, or one dose of castor oil, will answer the purpose. The use of mercury to the production of salivation is injurious.

The preparation of the bark, which is most in use, is the sulphate of quinine, either in pill, or solution, which latter mode is the better of the two.

In inflammatory, or malignant intermittents, should not wait for the full development of the intermission, but would begin at once the employment of quinine in large and strong doses, in order to prevent if possible the occurrence of the next paroxysm. In these inflammatory types of the disease, however, it may be necessary to draw blood, in order to arrest the stella of increased action which the quinine in little doses may induce; but the lancet should not be used to such an extent as to run the danger of striking the lancet of debility.

Among the remedies which have rendered the most service in the treatment of intermittent fever, the cinchona and its preparations, are arsenic, and the willow bark. These

is, however, a grave objection to the employment of arsenic, it being stated that it is liable to produce [illegible] effects [illegible] fully [illegible].

[illegible] willow bark in mixture or decoction is a remedial agent of some value. [illegible] to, it would seem as if Providence had placed it [illegible] poison; for these trees," he goes on to say, "abound and flourish in marshy places. The febrifuge properties (of the bark) are thought to reside in an alkaloid [illegible] contains, called salacine.

Sulphate of zinc, piperine (the crystalline salt of pepper), muriate of iron, are all remedies which are used from time to time in this disease.

During convalescence any vegetable tonic may be employed.

The

Inaugural Dissertation

on

Pleurisy

Submitted to the Examination

of the

Provost, Regents and Faculty

of the

University of Maryland

for the

Degree of Doctor of Medicine

by

Philip E. Barber

of Maryland

Preface.

In taking a glance at the [illegible] of medical science which lies before me I see no set of diseases that call under for the serious consideration and the earnest and devout study of every [illegible] student of medicine. I mean those of the throat, for until recently they have in a great measure been hid from our view, but we now have [illegible] to voice that the [illegible] investigation and proper [illegible] we diagnose and treat with certainty these dark and heretofore mysterious diseases. Although we cannot in all cases relieve we can palliate the patient's suffering and tell him when necessary of his fate, whether it be good or evil.

In considering the various diseases of the throat, [illegible] has a higher claim, none that is of more importance none that [illegible] [illegible] in the acute and chronic forms [illegible] [illegible].

Pleurisy

1.) [illegible] is inflammation of the [illegible]

[illegible] both pleura may be inflamed alone but not an [illegible] right side it [illegible]

(2) The anatomical changes of acute pleurisy are important: the first deviation from the healthy state [illegible] an inflammed [illegible] in proper serous tissue. This is followed by [illegible] which may be concrete or liquid or both, a [illegible] is sometimes preceded by the exudation [illegible] fibrous, equalizing [illegible] and adhesions in form of false membranes to [illegible] of the pleura and is accompanied [illegible]

[illegible] and easily detached, but at a later [illegible] [illegible] and [illegible] [illegible]

[illegible]

[illegible] upon one of the [illegible]

[illegible]flammation is of a fibrinous nature [illegible] and

[illegible] been red [illegible]

and forming a vascular connexion with the pleura,

in the beginning there is but a small portion of

the liquid with the concrete [illegible], but it

increases from a few ounces to several pints the

[illegible]

[illegible]

[illegible] is a [illegible] liquid, sometimes pur-

ent. by this liquid the lung is flattened, pressed

[illegible]

[illegible] and carried to the upper and back part

of the chest - the apparent thickness of the pro-

[illegible] trans

[illegible]

[illegible]

[illegible]

[illegible]

[illegible] - they are often united by [illegible]

[illegible] have not [illegible]

[illegible] the pericardium

[illegible] space is rapidly when present it must be removed
absorption. Hence the arrest can take place. In
[illegible] whole serious albuminous
[illegible] fluid is absorbed. With the absorption the lungs
[illegible] the chest may
[illegible]

[illegible]

[illegible] The same as in the acute. Though there
[illegible] the liquid is more at
[illegible] dilatation of the thorax and compression of the
[illegible] a small space it is thicker and
[illegible] pressure in diva, with the exter-
[illegible] containing more. There is thus in the acute
[illegible] membranes are thicker, consisting of
[illegible] four layers: the first inserted tissue and
[illegible] and finally there are the more recent which
[illegible] exist. The lungs in the lungs
[illegible] is changed resembling that of the lungs
[illegible] compression causes — a serous fluid is constantly
[illegible] sacks formed by the adherence of the lungs
[illegible]

[illegible] abscesses [illegible]

[illegible] liquid is forced up to the mediastinum, [illegible]

[illegible] passed to its former size. This is the cause of the dyspnœa [illegible] common in chronic pleurisy. The spaces [illegible] in particular filled with false membrane, which [illegible] firm with it, and cannot be [illegible] expectoration, and is thus the cause of [illegible] such as cartilaginous or bony plates. [illegible] abscesses and gangrene. The lungs [illegible] adhesions, thus the effusion remaining for a long [illegible] time. This happens especially in empyema or [illegible] chronic cases. Sometimes an opening is made between the pleura and bronchia, through which pus is discharged and air admitted. The liquid sometimes takes a downward external direction forming abscesses which [illegible] open, and the patient sinks, [illegible] exhaustion.

The symptoms of [illegible] pleurisy [illegible] [illegible] quick breathing and fever, the pain

[illegible] accompanied by a sight [illegible] it is sharp and [illegible] as if some penetrating instrument were thrust into the part affected. The pain may occur in any part of the chest, though it is more common in the mammary region in the scapular region and in the side. it is increased by lying on the affected side from the weight of the lung pressing on the inflamed surface, also by inspiration, cough, pressure between the ribs. The patient sometimes experiences a [illegible] by the [illegible] breath; it increases or decreases sometimes with fever it diminishes in three or four days and the patient is able to lie on either side. It is a high pain is [illegible] in some cases of [illegible] shooting [illegible]

place. The patient lies on the affected side to prevent [illegible] one in the sound lung, the only one performing its office or more commonly in a position between that upon the back and on the diseased side.

The breathing is generally [illegible] and quick, and the difficulty of breathing does not diminish with the pain, but sometimes increases as the disease advances, so much so that the patient

[illegible] want of breath, and it is [illegible] commonly recognized as the catch for breath. The cough in pleurisy does not occur in paroxysms, it is small and difficult, also ineffectual, it is at first short and dry, or is attended with a slight mucous or frothy expectoration — if there be much frothy expectoration or mucous rattles is present, if much colored sputa, pneumonia. The fever often undergoes a daily remission and exacerbation — the latter is in the morning or late towards evening. It generally commences with a chill followed with a hot skin, dry and furred tongue, a frequent, full and tense pulse, it generally subsides in four or five days.

Stand [illegible] the signs of the disease is of the utmost importance, indeed they are indispensable necessary to the formation of a correct diagnosis. The motion of the affected side is not as great as the sound side. If there any liquid is poured out, percussion is clear except a slight diminution of the respiratory murmur, owing to the lung not expanding as usual. If the effusion has taken place and is encysted, the bronchial sound may be heard caused by the vibration of opposite surfaces

this is not heard when adhesion has taken place, or when the surfaces are prevented from coming in contact by liquid effusion - when liquid effusion takes place, the [illegible] and [illegible] are [illegible], and the dullness increases with increase of effusion. It is first noticed in the lower part of the chest, but as the disease advances it rises higher. This dullness generally fills the thorax and the lungs [illegible] above unless confined by adhesions. The anterior axillary region is the last to become [illegible] when a portion of lung is in contact with the walls of the chest a tympanitic sound is heard on percussion. The respiratory murmur which is impaired by the ineffectual [illegible] of the lungs causes atelectasis where the liquid is abundant. The respiration is heard at the root of the lungs and compression of the air cells, but when the liquid is abundant, this sound is lost except below the scapula. On the opposite side the respiration is more distinct than in health and often puerile.

In a more advanced stage of the disease the vocal resonance has a trembling or bleating sound known as aegophony, caused by a moderate effusion between

the lung and side of the chest - this also can [illegible] the amount of fluid is [illegible]. It is [illegible] of dullness in the third and eighth ribs, in the mammary region and [illegible] the scapula and mamma, but when the lung is adherent to the walls of the chest the morbid sounds are harsh and clear, from compression of the air cells. The [illegible] tion undergoes similar changes, being clear while the liquid is flowing, diminished in amount of liquid, finally ceasing when effusion is abundant - but harsh when the lung is adherent. The affected side of the chest is frequently [illegible] while the other [illegible]. The heart may also be distended when the effusion is great if the lung does not expand as the fluid accumulates the ribs sink inwards the lung to fill up the space left between the lungs and ribs. This causes the external deformity so common in pleurisy. Persons thus affected incline towards the diseased side, and the shoulder seems depressed.

The causes of acute pleurisy is uncertain [illegible] and [illegible]

[illegible] sound side and no physical [illegible]
the disease may be cut short by medication, but
[illegible] there be a catarrhal cough or no cough
[illegible], it can not be distinguished from pleuro-
[illegible]
[illegible] lymph has taken place, and that it
[illegible] a longer time for cure this latter could
[illegible] disappear in four or five days it may
be [illegible] by weakness, a diminution of respirat-
[illegible] by asphony and dullness [illegible]
[illegible] the progress of the disease be arrested here,
the symptoms decline, the fluid is absorbed and the
patient [illegible]
[illegible] here, and effusion continues, acute
[illegible]
[illegible]
[illegible] of the patient. The healthy vibration is [illegible]
[illegible]. The pain has ceased in a measure, but
dyspnoea is severe the patient [illegible]
[illegible] sound side, in this condition the patient
may [illegible] for a longer or shorter time, recover,
[illegible] take place [illegible] in four
or five months, or it may assume the ch[illegible]

form, should the disease take a favorable course all
[illegible]
[illegible]
as the fluid is [illegible]
[illegible]
[illegible] stages of absorption, the respiratory
murmur and friction sound is also heard again
and [illegible]
[illegible]
[illegible] then in the lower the lung if it has not
been compressed too long, expands as the liquid is
absorbed and fills the space previously occupied
by the effusion, but there is often [illegible]
the side, because the lung from its long com-
pressibility cannot expand so fast as to fill
up the space [illegible] the side,
the side, and the mediastinum and heart
in full in to this space, while [illegible]
[illegible] defect if the lost [illegible]
[illegible] in one [illegible].
[illegible]
is often attended with other diseases, such as
diarrhea, rheumatic pains, [illegible]
skin and profuse perspiration. The still

frequent pulse and difficulty of breathing remain
in some degree after [illegible]

But should [illegible]
i.e. pain may be felt in one or both, the symptoms
in this case are more severe, much greater difficulty in breathing, and we cannot compare sides by auscultation or percussion,

The effusion in pleurisy is [illegible]
two place, it may be [illegible] the [illegible] left
between [illegible] in the place of the diaphragm, which is [illegible] by [illegible]
border of the chest. the pain is increased by respiration, coughing, or pressure on the abdomen
the difficulty of breathing is here distressing, or it may attack the mediastinum or fissures between the lobes of the lung, but we cannot always distinguish it [illegible]
Pain, cough and difficulty of breathing is
scarcely ever absent through the whole course of the disease.

Unfavorable terminations of acute pleurisy
which are not [illegible] if [illegible]
the effusion increases, [illegible]

[illegible] then becomes small and weak and the heart ceases [illegible] death [illegible] instances [illegible] the fact [illegible] opium, under the influence of exhaustion, [illegible] discharge [illegible] vital [illegible].

The case of [illegible] pleurisy is but a continuation of the [illegible] and it is of the same low grade from the commencement, there may be a [illegible] into a large [illegible] effusion may be absent, the pain is [illegible], but there are sometimes [illegible] of a [illegible] of a certain [illegible] though not as [illegible] as in the [illegible] because the effusion is [illegible] the lungs adapt [illegible] this new situation, the patient [illegible] walk about, but is generally feeble, the face [illegible] the pulse is [illegible] there is [illegible] and paroxysms of [illegible]. The chest is

It is largely distended, the intercostal spaces are widen
ed and [illegible]
ent mixed in respiration and fluctuation can be
felt in some instances between the
the heart is also displaced, a dull instead of a
clear sound is [illegible]
owing to the displacement of the mediastinum
The liver and spleen are also below their usual level
percussion yields a dull flat sound over the disten
ded [illegible] if [illegible]
there is much fluid [illegible]
in addition, the respiratory murmur is absent
there is no vocal resonance and bronchial res-
piration is [illegible] perceptible. But if
adhesions to the costal pleura, bronchial [illegible]
may be found, or separated by effused fluid
the [illegible] splashing is also perceptible - if the adhesion
be [illegible]
sound on percussion, with sounds of respiration.

In the course of chronic pleurisy the liq
is [illegible]
[illegible] until the patient sinks, or the liquid
is discharged by [illegible]

The deformity of the chest is variable, sometimes very slight, then it is again very [illegible] -ed. The cause of this deformity is [illegible] the contraction [illegible] the patient [illegible] [illegible] while this deformity exists the sounds of respiration and percuss-ion are imperfect, because the chest has not contracted enough to fill the space occu-pied by the fluid. If the exudation is not ab-sorbed, the danger of fatal [illegible] is great. The effusion may be of a serous or it may be pus. If pus is present death is almost in-evitable, as it is scarcely ever absorbed, in some cases a communication is formed between the pleura and bronchia, through which air enters and pus is discharged. If the liquid or pus be not so great as to overwhelm the lungs and produce suffocation, sometimes [illegible] and external course [illegible] in course of time forming a communication [illegible] the cavity and external air. In either of these openings, air is almost sure to enter the cavity, which is apt to produce fresh inflammation

[illegible] the liver or lung, the space between the fifth and sixth ribs is the place recommended and generally selected for the tapping.

In acute pleurisy the patient should lie with his chest elevated, and should not be exposed in making any examination to the external air. The temperature of his room should uniform and comfortable, his diet should at first be limited to of mucilaginous or farinaceous liquids, tea, toast and tea, fresh fruits as oranges, grapes, dried fruits and preserves, refreshing acidulated drinks should be given freely.

[illegible] substances of a farinaceous kind, fresh vegetables, and fruits should be used, when there is great weakness, the lighter kinds of animal food such as eggs, poultry, game, fish, and [illegible] meats.

[illegible] chronic pleurisy may terminate in a few weeks or it may run on for years — death may be sudden [illegible] patient [illegible] other complication.

The [illegible] of pleurisy are [illegible] as in other inflammatory diseases. Exposure to cold, or cold [illegible] injuries, contusions, lacerations, wounds, [illegible] of a broken rib, it may be also caused by the rupture of tubercles. The [illegible] is the extension of a tubercular excavation, or a perforating ulcer of the pleura [illegible] tubercles in the lungs [illegible] cause pleurisy, [illegible] exposure to [illegible] women are often attacked, [illegible] Pleurisy may be [illegible] with pneumonia [illegible] muscles and [illegible] is sharp [illegible] is moderate and dull [illegible] the expectoration in pneumonia is rusty and viscid in pleurisy clear and mucous, which some-

[illegible] streaked with blood. The crepitant rale is not heard in pleurisy, while in pneumonia [illegible] and the [illegible] and [illegible] respiration may exist in both, but is more distinct in pneumonia [illegible] when there is much liquid.

In pleurisy where compression exists - respiration is scanty and vocal resonance is absent in [illegible] while [illegible] exists [illegible] tracheal respiration is present [illegible] resonance is plainer than in health. The dullness is more complete, commences earlier and varies with position of patient [illegible] while in pneumonia the vocal resonance or vibration is more distinct than in health; it is absent in pleurisy. The [illegible] of the chest and [illegible] spaces. The displacement of the heart, liver and stomach which occur in pleurisy are absent in pneumonia. If cough and pain do not exist, the disease is often not noticed.

In pleurodynia there is [illegible] the signs of pleurisy are absent [illegible] the pain is [illegible]

confined to adhesive pleurisy. Pericarditis is distinguished from pleurisy by the situation of the rub and position of the patient, the latter being in a sitting position, but it is the presence of a rub sound accompanying the action of the heart (not with the movements of respiration) and also by the absence of dyspnoea.

The Diagnosis of chronic pleurisy is not difficult unless there be adhesions, and it exists in conjunction with some other affection. The prognosis of pleurisy depends upon the cause, the different stages and the kind of pleurisy present. Simple pleurisy of one lung if properly treated with proper treatment generally terminates favorably, when there is a large effusion the case is doubtful. Though if complicated may terminate fatally. Complicated cases are very dangerous. If pleurisy occurs in febrile diseases, or rheumatism, since it is apt to hasten the fatal issue.

When tubercles exist, the case is almost serious death, when pleurisy is complicated with organic disease of the heart, liver or kidneys

it is indeed much more dangerous. This disease is much more dangerous in the old than in the young because they are little able to stand any drains and because there is a tendency in the young to the effusion of lymph to be quickly adhesive of the pleura, while in the old the secretion is more apt to be serum or acrid pus, which is always dangerous. In the first, pain, labored expiration and general weakness are bad signs. Pleurisy may terminate in adhesion in recovery in chronic disease of the pleura, leading to

In the commencement of acute pleurisy, while the pain is severe, and difficult respiration is present, the lancet should be employed, and much blood in the early stage, and until the pain is relieved, the difficult respiration has abated, so that the patient can draw a full breath, or until syncope is about to take place, from twelve to twenty ounces may be drawn, by this means the disease is often arrested in its beginning, but if the pulse continues firm, a second venesection should again be made. If we can not use the lancet

we must [illegible] to local bleeding. After venesection the [illegible] should be [illegible] to [illegible] combined with opium [illegible] of magnesia or senna salts, when the bowels have been emptied and [illegible] be [illegible] with [illegible] opium and [illegible] pulvis, a grain each, with two or three grains of calomel may be given to prevent rest. if the skin is hot and dry, small doses of tartar emetic may be given every third or fourth hour, with an effervescing draught. if the inflammation still continues after the pulse has been reduced, the leeches must be applied to the chest. blistering or pustule-blisters may also be used. they should be large and kept upon an adult from eight to twelve hours, at this time if the effusion is not absorbed mercury may be given in small doses, until the gums are [illegible] it may be [illegible] with opium. If there is effusion yet remaining and no fever, abscess [illegible] to be [illegible] with calomel, if the pulse is fast and not much weakness, digitalis may be given. [illegible] catarrhal symptoms [illegible]

scilla is used, milk is given largely diluted with water, cream of tartar, calchicum, muriate of ammonia and iodide of potassium (are recommended. – Blisters is [illegible] used for [illegible] by this [illegible] is [illegible] when tubercles exist with pleurisy. If [illegible] is given it must not be allowed to produce a deposit as it might favor their deposition. In asthmic cases, depletion must be employed with caution. In intermittent forms remittent with typhoid form or rather tendency, [illegible] may be used freely –

Chronic pleurisy requires moderate bleeding if any, local bleeding is perhaps the best, blisters in the form of the tissue are indep[illegible] the [illegible] [illegible] in quick succession, or stimulating dressings should be used to keep them open, so as to produce a free discharge. In old or [illegible] cases, pu[illegible]lation with tartar emetic, issues and set[illegible] are substituted to blisters [illegible] squill digitalis and scilla are used to produce absorption mercury and iodine or iodide of pot-

ach. mercurial frictions are also useful. Opium, Hyoscyamus and other narcotics are used to allay cough. When [illegible] be used, such as wild cherry bark, the mineral acids and iodide of iron.

When the effusion is so great as to threaten suffocation, whether in acute or chronic [illegible] or must resort to paracentesis. This operation is also recommended in chronic cases, when all other means have failed to remove the fluid and death is threatened from its [illegible] the chest. Writers differ in the [illegible] of this operation as to whether it is best, and when it is best to draw off all the fluid or not, and when the wound should be closed or not. Whether all the liquid should be drawn off, depends upon its nature if it be serous and not irritant and the disease has not existed long enough for the lung to be [illegible] in a particular position, such as [illegible] expansion [illegible] will [illegible] to fill the deficiency of the chest, may thus in some case be avoided, but if the liquid be pus, all

should be done if possible.

If the liquid be serous, the wound should be closed, to prevent further inflammation from the [illegible] air.

If there be pus in the cavity, with a tendency to accumulate, the wound should not be closed. It is also recommended to inject the wound with antiseptic (or somewhat stimulating) liquids, if the pus be offensive, and there is any sign that the pus will [illegible] the healthy state such as a weak solution of creasote and iodine injections.

After the pus has been washed out, a mucilaginous liquid may be injected such as a decoction of marshmallows a solution composed of one part of liquid of potassium to [illegible] tinctures of iodine and a hundred of water, about four fluid ounces may be injected every three or four days. We must always be certain that liquid is present, where we perform the operation, else we may

An

Inaugural Dissertation,

on

Acute Laryngitis.

Submitted to the Examination

of the

Provost Regents and Faculty

of the

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John B. Ireland,

of Maryland.

Acute Laryngitis.

[illegible]

[illegible] but does occur in [illegible] [illegible] generally [illegible] [illegible].

[illegible] [illegible] [illegible] the subject I have chosen for this is a Consideration of Acute Laryngitis. Of the Acute form [illegible] [illegible] of [illegible] a [illegible]; [illegible] it is very superficial [illegible] [illegible] inflammation extends to the submucous tissue; [illegible] pseudo-membranous laryngitis where a false membrane is formed in the larynx.

1st Mucous [illegible] [illegible] [illegible] generally commences with a slight hoarseness —

[illegible] difficulty in [illegible]

[illegible]

[illegible]

Treatment.

[illegible] is [illegible]

[illegible]

[illegible]

difficulty [illegible]

[illegible], [illegible] are examined [illegible] will

be found reduced, [illegible]

[illegible]

the voice from the first [illegible]

the disease advances [illegible] reduced, so

that the patient cannot speak above a whisper,

there is almost always [illegible] difficulty [illegible]

[illegible]

[illegible], In some instances it come on

[illegible]

[illegible] some difficulty of [illegible].

[illegible]

[illegible]

[illegible]

there is generally some fever which may come on with the local symptoms, or not [illegible]

[illegible]

[illegible] the Cough is [illegible] and [illegible]

[illegible]

the external [illegible] and the [illegible]

with swelling. If the case continue to advance all

the conditions become aggravated. [illegible]

[illegible] the [illegible]

[illegible] difficulty [illegible]

[illegible] difficult. The

[illegible]

[illegible]

[illegible] Color [illegible]

[illegible]

[illegible]

[illegible]

[illegible] cold [illegible]

[illegible]

[illegible] and [illegible]

[illegible]

[illegible]

[illegible] accumulated [illegible]

[illegible] of the Head. [illegible]

[illegible] complete [illegible].

4

[illegible] disease when it proves fatal is generally [illegible], ending in from three to five days [illegible] death [illegible] case may be protracted for several weeks.

Pseudo membranous laryngitis. [illegible] upon the surface of the mucous membrane [illegible] membrane is formed in the larynx of children with [illegible] croup is seldom occurs in children the disease not uncommon constituting in them [illegible].

[illegible] after death. The mucous membrane [illegible] and inflamed while the sub-mucous

[illegible]

This disease may exist alone or complicated with other affections of the lungs, and liver, of the bronchial tubes.

Diagnosis. In this disease we have [illegible] the dyspnœa is of great intensity [illegible] in the bronchial tubes [illegible] the other diseases. [illegible] be distinguished from other diseases.

by the change in the voice. The peculiar cough, the feeling as if a foreign body was in the larynx, the [illegible] and the [illegible] difficulty of breathing.

[illegible] diseases of the chest [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] disease. [illegible] [illegible] pressing on the windpipe has given rise to [illegible] irritation [illegible] [illegible] accumulation [illegible] [illegible] [illegible] a mistake in [illegible]. [illegible] [illegible] the [illegible] has given rise to symptoms which have been taken for those of Croup; but a close inspection of the [illegible] [illegible] [illegible] [illegible].

In one form of Croup, [illegible] it bears a close resemblance; [illegible] [illegible] Croup we have a spasmodic contraction of the muscles of the glottis;

In laryngitis swelling of the mucous membrane on the side of the larynx breaks it is the most prominent and characteristic appearance.

Acute laryngitis may be confounded at first with some acute exanthemata attended with great swelling of the tonsils. But by examining the throat the diagnosis will be easily made.

Foreign bodies in the larynx give rise to symptoms similar to laryngitis. In both cases, however, the absence of fever, also the presence of foreign bodies.

Causes. The most frequent cause of acute laryngitis in all its forms is exposure to cold, or cold and wet especially when in a state of perspiration, or heat or exercise. Continued and frequent use of the voice sometimes produces the complaint.

Other causes are such as produce direct injury to the larynx, [illegible] are the hot water or corrosive applied to the hot air inhaled during [illegible] or corrosive irritating gases, or poisons taken in during inhalation, and the unskilful insertions of instruments, and external violence. In Good's Death of Harvey was a severe case of [illegible] resulting in [illegible] a bottle of chlorine.

The disease may be caused by an extension of inflammation from the neighbouring parts, or [illegible] extending into the larynx [illegible] causing laryngitis.

Erysipelas, and the eruption of scarlet fever sometimes [illegible] inflammation. [illegible]

The disease also included occurs as a consequence of typhoid fever. Some writers consider it an evidence of individual large pith. The disease is thought to occur more frequently in middle and advanced life. Burns about the head or face causing it. The brain is found inflamed. Inflammation of the lungs caused by the excessive use of Mercury may sometimes result in this organ.

Prognosis. In its most simple form it is a very dangerous disease, and is fatal in a great many instances. It has been considered by some writers as the most fatal of all the inflammations. But it may be said of the brain that if the case is seen early and the attack is not very violent we may hope for a favorable termination.

and early diagnosis. And the prompt attention of a skillful physician will add very much to the patient's safety. In most of the fatal cases, death takes place from the first to the fifth day. When the face turns blue or becomes livid from the circulation of black blood, the danger is extreme. On the other hand, decrease of difficulty of breathing, freedom of expectoration, all tend to recovery.

Treatment. In mild cases, but little treatment is required, a dose of sulphate of magnesia a cathartic diet if the weather is cool, or a warm compress to the throat will be all the remedies required. If the fauces on examination, be found reddened, a solution of alum should be used as a gargle. When the disease is more

violent, with febrile action, a strong and hard pulse; blood should be taken from the arm in quantities depending on the violence of the symptoms and the patient's strength. After the first bleeding give ten to twelve grains of Calomel combined with an equal quantity of Compound Extract of Colocynth. Leave the bowels to the bowels. The bowels should be afterwards regulated by laxative enemas if required, if the patient do not vomit, the purgation should be effected by laxative or drastic purgatives, in combination with Epsom salts and Tartrate of Potash if the urine is not acid. The throat should be considered as an important feature, on having a small portion of hardness, so as not to allow a passing of burning down the throat.

Bleeding from the arm has become inadmissible, but from Emetics bleeding at-

the tonics will prove useful, in the advance stage of the disease, or, if cases of inquiry with the antimonials or ipecacuanha wine; will be found very useful remedies, also small doses of opium or hyoscyamus will be found useful by allaying cough.

Blisters about the back of the neck is also another important remedy in this period of the disease. If the treatment proves unsuccessful; recourse should be had to the mercurial influence, which will seldom fail in this stage in ordinary inflammation.

The patient should be instructed not to use his voice during the last of the treatment of this disease. Cathartics low diet is also requisite for the cure of this complaint.

In certain cases of chronic-bronchitis

[illegible] brought [illegible] and
[illegible] and [illegible] [illegible]
under the [illegible] [illegible] and the
[illegible] of a blind [illegible]; little can
be done towards the cure of the disease.
In the early stage of the disease
it is not so much difficult, but it
should be taken [illegible] [illegible] [illegible]
[illegible] [illegible] the condition of
the [illegible] that we should not [illegible]
[illegible] [illegible] for a certain amount of
[illegible] force is required to overcome
the resistance in the retina [illegible]
therefore if the [illegible] be [illegible] to
[illegible] it [illegible] [illegible] [illegible].
[illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible].

It should be given in small doses at first to be followed by smaller doses until the system is brought under its influence. The [illegible] [illegible] two or three hours [illegible] [illegible] [illegible]. [illegible] [illegible] [illegible] [illegible] [illegible] may also be [illegible] to [illegible] the effect on the system.

As soon as the gums are found to [illegible] the mercury should be [illegible] small doses of [illegible] with the [illegible] [illegible] [illegible] the [illegible].

[illegible] by the [illegible] [illegible] the [illegible] [illegible] [illegible] [illegible] [illegible] have great [illegible] [illegible] [illegible] [illegible] [illegible]

would be [illegible] to [illegible] the [illegible] [illegible]
[illegible] the [illegible] and the distension.
Emetics and [illegible]; in acute [illegible]
[illegible]
inflammation [illegible] [illegible] [illegible]
[illegible] of the [illegible] attending the inflammation;
Dub. Dr [illegible] thinks in these cases
a much better [illegible] a solution
of tobacco [illegible] to the throat [illegible]
being used to prevent a too [illegible]
sedative effect. Blisters if employed
should be [illegible] the back of the neck,
so as not to be in the way of [illegible]
or tracheotomy. In case of the intense
forms of Laryngitis where there is not
much inflammation [illegible] [illegible]
[illegible]
[illegible] [illegible] should not be [illegible]
[illegible] in such cases [illegible]
[illegible]

After bleeding and purging has been tried or tried unsuccessfully the only remedy is an opening of the trachea to let blood in the operation of the bronchotomy. When the operation is performed the wound should be made between the cricoid and thyroid cartilages. Thyrotomy is, indeed, become inactive, and it therefore in cases admitting no other indication, as the trachea is not involved in the disease, and incision with it in no the introduction of the tube, in order to produce as much irritation as should be produced in the actual inflamed larynx.

It is of great importance to employ this remedy in time, as soon as the patient shows a disposition to vomit and the skin become clammy.

The operation should be performed by
St Mary be employed in the earliest stage
of the disease if there is danger of suffocation, the
tube that is used should be a long
one for in the adult. If the inflammation
has subsided the glottis may often
remain open for a long time
to health. The patient's passage
the tube should be taken care of
the operation attended to.

In the Office of Surgery
Embrace the advantage of either in cases
of acute laryngitis by means of
a sponge or feather over the
larynx with warm water, the
membrane with the elevator in
some in cultivated water. Division in
the glottis is best done by a
cutter or an inter cut cutter
of edema of the glottis.

An

Inaugural Dissertation

On

Dysentery

Submitted for Examination

By the

Dean, Regents and Faculty of Physic

Of the

University of Maryland

For the

Degree of Doctor in Medicine

By

Samuel Alex. Mendes

Dysentery

Dysentery — A disease which is common to nearly every clime — is found to prevail with unrelenting severity during some seasons — bidding defiance to the most active medical treatment and skill; at others mild and under the control of simple medical agents and care. It is a disease which visits impartially, the man of wealth as well as the man of poverty — the man of authority as well as the subject. It like the avenging Angel of the Almighty Being, has been the instrument to humble the pride of nations — Armies have been attacked and thousands, like the leaves of the forest on the approach of the first untimely frost, have faded withered and fallen to the dust. The fireside has been made desolate, the Orphan's cry has been heard to utter the sweet but sad accents of grief, Where is my mama? Where is my papa? The wife's brow is he laved with a tear at the loss of her kind and —

grief sorrowing husband or the lovelier offspring of her bosom, and the husband made wretched and weary of living, on account of its cruel visitation, but enough of unimportant and tedious detail.

The Characteristic symptoms of Dysentery— the first griping pains in the abdomen, followed sometimes and very often by diarrhoea, which soon develop itself into frequent discharges of mucus and blood— with spasmodic action of the muscles engaged in defaecation straining and tenesmus. The disease however just as commonly burst forth without the least complication. The first intimation the patient has of his situation, is produced by one or two shooting pains across the abdomen, with a desire to stool, which after a somewhat fruitless attempt; nothing, but a little mucus, he retires, and in a short time is called again and again with about the same

mucus, with the exception perhaps, of a little addition of blood. Sometimes hard lumps of fæces called scybala are thrown out combined with the mucus or blood, which seems to be the exciting cause — or more likely there seems to be a retention of the natural fæces, which are occasionally expelled in small hard lumps, with there surfaces lubricated, with the preceding mucous evacuations. This mucus packets within the folds of the intestine, near the anus, which the first efforts at defæcation, throw out, and all further attempts and desires for expulsion are in vain. This was the case with several patients that came under my observation and attention whilst a resident of the Baltimore infirmary. The return from irritation produced by inflammation, contracts upon itself involuntarily and spasmodically, and the only way, apparently, that the contents of the alimentary canal

gain entry, is by its granulation.

Dysentery, consists in inflamation of the mucous membrane of the colon & rectum. It may be either acute or chronic, both of which may occur independently of the other.

The acute form in its incipiency may be ushered in suddenly with active hemorrhagic discharges from the bowels as a diarrhoea, with tenesmus and tenesmus followed by inflamation of the above named intestines. It sometimes manifest itself in a periodic form — occurring at regular intervals with griping pains &c, and the stools may consist either of bloody mucous or serous. This variety is called the intermitting form of the disease or the disease may come on — superadded, the derangements of the functions of the liver, Spleen and Stomach, especially those that reside in malarious districts, which has been term-

ed the bilious or remittent type, of these I shall hereafter speak.

The most marked symptoms in the acute form — are measures in the abdomen, griping pains, with tenesmus, hot and tender abdomen over the courses of the colon and rectum. The stools are bloody, mucous, fœtid, dark colored, and contain lumps of a membranous character, that is, when they contain fæcal matter. At other times, there is a great desire to stool, and when the patient is in the act, he is seized with great pains — and a vain attempt to pass more than a few ounces of bloody mucus, of a gelatinous nature, without the least trace of fæcal matter resulting.

Dysentery may set in with or without precursory symptoms. In the former case, it is preceded by general uneasiness, lassitude, impairment of the appetite; dull or transient pains in the abdomen, costiveness or diarrhœa, and

other evidences of moderate intestinal irritation. Sometimes the local symptoms make their appearance before the general, and in mild cases may run its course without fever. Then again the local and febrile phenomena commence simultaneously — the patient being attacked with a shivering of the frame almost as soon as the complaints of pain and tenesmus. Again the fever often precedes, and occasionally for a considerable period is evidence of the disorder of the bowels.

The disease presents from a very slight affection, implicating but a small extent of the colon and rectum, passing off in five or three days, but sometimes owing to a peculiarity of the constitution, or to some great malignancy of the poison, the system receives a shock which the powers of life are scarcely able to react. Or after the disease has gone on for somewhat, unaided by medical treatment or neglect,

all the powers of the frame will sink down into a typhoid or collapse condition, or a general depression of the vital forces — livid lips, the eyes sunken, circumscribed by a bluish link, with delirium, hiccough and finally death terminates this mortal existance. Such cases occur but seldom; principally observed by large and experienced practitioners to prevail during epidemics. I have seen but one case in which all these symptoms were developed. The patient from the beginning was attended by two eminent and talented Physicians, who did all in their, that the case seemed to require but to no avail — the system never recovered from the first attack.

The nature of the stools in the beginning, consist somewhat of a transparent whitish mucus, or of mucus — streaked with blood and a little fecal matter, which may be altered by bile,

small portions of false membranes and coagulated lymph. It is this decay of animal matter combined with vitiated secretions, or secretions undergoing decomposition, no doubt that gives the peculiar disagreeable fetor to the discharges. Though this does not occur generally, unless the disease has gone on for some time or three days, at which time in severe or moderately severe cases, there is nearly entire suspension of the natural stool. The inflammation if not checked, will gradually, and sometimes rapidly extend along the courses of the colon and rectum, the extent of which may be pretty accurately ascertained by percussion or pressure over those parts. If there is much tenderness over the Epigastrium and right side we may conclude that the whole of the large intes-

times are involved or the inflammation has reached the transverse and ascending colon.

There is also tympanitis very often of the abdomen, principally over the regions of the colon—owing to the accumulation of flatus. When this takes place, there is more or less high fevers, the pulse full hard and quick the skin dry and hot, the tongue coated with a whitish fur, and the stomach, liver, kidneys, bladder urethra sharing in the general disorder—producing anorexia, diminished secretion of bile, and urine, strangury and painful micturition, and in female, the vagina sympathizes.

As a general rule the disease takes a healthy return about the eighth or ninth day—danger in ordinary cases is increased from eighth or 10th the disease continues for a week or ten

days without any moderation — the symptoms before spoken of are apt to become developed, and if the patient does not perish immediately the chronic form with all its sequences, are very likely to supervene, and from its constant drain upon the system the patient sinks or complete recovery may take place but in aggravated cases it is very common, and fatal. In the latter stage of the disease, the discharges become very offensive, and resembles the washings of fresh meat. I recollect seeing a patient troubled with a chronic mucoid discharge, which he said had lasted for five years, severely without any intermission, and were increased whenever the man imprudent or indulged in his usual diet, which consisted principally of milk and mush, tea, toasted

bread soaked in water, chicken and broth, soups &c.

Chronic Dysentery — Commonly follows the acute form — When it occurs independently it is generally associated or complicated with Chronic enteritis. It sometimes, though rarely, proceeds from fistula in ano and hemorrhoidal tumors — the inflamation being extended).

The principal symptoms in this form, consist in the stools being less frequent, more fecal & mixed with mucus; tormina generally only when pressure is made and less tenesmus than in the acute. There is scarcely any perceptable difference in the skin, pulse, and indeed general health of the patient in chronic Dysentery and chronic enteritis. After the disease has continued for a time

signs of hectic fever, or the various hydropic affections are, very likely to come on — in consequence of the system becoming prostrated through the excessive evacuations, depraved nutrition, secretions, deposits &c. The membranes are also very apt to become thickened and the patient sooner or later falls a victim.

The Bilious form — In regard to the bilious form, there is nearly always functional disorder of the organs — the liver may fail to secrete, or it may over secrete the natural healthy supply of bile, but most commonly there is suppression, the bilious symptoms may precede, supervene or coexist with the disease, as a general rule however, they are present in the beginning, and

arise very probably from the same cause that lights up the inflamation in the intestines. But in the simple and mild cases, where apparently, and no doubt the disease sometimes is produced by indigestible articles of food, or from the irritation that follows active diarrhoea from the bowels — the derangement of the functions of the liver and stomach seems to depend upon sympathy. The symptoms that most commonly mark this form of the disease, is epigastric oppression, vomiting, yellowness of the skin and conjunctiva, the tongue coated with a yellow brown surface with its borders red, and diminished secretion of bile and urines. The fevers are higher and a greater tendency to delirium.

The remittent character of the disease persists chiefly in malarious districts, and is known by the marks of remittent fever being blended with it. There is constant fever with exacerbations and remissions, the tongue coated with a whitish fur generally and dry, the skin dry and hot. The stomach is more irritable than in any of the other forms, vomiting is more constant and the ejectment of bilious matter more common.

Sometimes the disease from the beginning assumes the typhoid character, with sinking of all the powers of the frame and when apparently on the brink of eternity, the system reacts and convalescence takes place. Then again death may be the result, though its most

usually run a regular course and terminates favorably, under judicious treatment.

The intermitting form is very common in some sections of the country and like its kindred affection, remittent fever, prevails in malarious districts. It is a very interesting malady, and consists in a perfect intermission, occurring at regular intervals with all the symptoms in the acute form, lasting two or three hours, when they subside with a language, the consequence of the paroxysm. These paroxisms may be either of the quotidian, tertian, or quartan variety. There is a disease very much resembling this bis, intermitting diarrhoea, and it is sometimes very difficult to discriminate between the two, the evacu-

ations in both being somewhat serious, though there is one great mark of distinction. In the intermitting diarrhoea, there is no straining and tenesmus, and often but little tormina; but in the Dysentery there is all or nearly all of the signs of the real disease in the acute stage present, viz straining, tenesmus, tormina, blood, and mucous stool, &c.

The causes of the disease are various, but for the most part, especially that which gives rise to the Epidemic character — is unknown and unaccountable. Dysentery prevail epidemically or Sporadically — Epidemically, where a whole district or section of country is simultaneously affected — Sporadically, where the disease arises from in-

pendence, or where a single individual is attacked. The contagiousness of the disease is doubted, and thus far the opinion of the Profession tends to the negative.

It has been observed by numerous authors, that persons exposed to all states of the atmosphere, subject to great variations of temperature, of heat, cold wet and dry — persons travelling a long distance in hot and moist weather, or labouring people are very apt to contract the disease. Those that are subjected to the same Epidemic influences so gives rise to remittent and intermittent fevers, are said to be more susceptable, than those that are remote from its cause.

One of the most common

reputed causes for its production on the Western Shore of Maryland — is the imprudence in eating unripe and acid fruits, such as apples, cherries, grapes &c. In eighteen hundred and fifty three, nearly every family in my district, eight or ten miles around probably — suffered from this malady and nine cases in ten the patients had indulged in eating cherries — there being quite an abundant crop that year.

Another and what appears to be more of an exciting, than a productive cause — is the sitting or lying down upon wet and cold ground, — thus armies and travellers, being often necessitated to sleep out with scanty insufficient clothing and food —

have been attacked by Dysentery, and thousands have fallen victims to its ravages. Again, it exists Epidemically without giving the least perceptible cause for its prevalence; and I have known men that were considered scrupulously exact in regard to their diet and habits — to be seized with the disease, with as much violence, as those that some reputed cause might be adduced. Then again on the other hand I have known persons who indulged in every species of luxury, such as eating all kinds of unripe fruits, drinking to excess all kinds of liquors, and exposing themselves to all kinds of harsh and inclement weather, to escape its influence. Drinking of cold water by workmen in warm weather seems

to be one of the means by which the distemper is lighted into action; And I have known six out of twelve in the harvest field — to be seized, where no other cause could be ascertained, with the exception probable, of a little whisky, which the farmers during those occasions, are in the habit of furnishing the labourers.

The eating of indigestible articles of food also seems to be one of the sources by which the disease is set up, but during its prevalence, or — where the nature of the malady is epidemic — many simple and foolish causes of its production are mentioned, but it appears as often without as with a cause.

The treatment of acute Dysentery — In mild cases where the patient only suffers from frequent evacuations, with but little tenesmus and tenesmus, unattended with fever, and where the contents of the abdomen expelled consist the greater part fecal matter — little or no treatment is required — rest, low diet, generally in such cases being sufficient to effect a cure, though we should never rely on this, for very often the mildest cases are prolonged and even prove fatal in consequence of paying to little regard to the state of the patient. Very often when the disease commences with symptoms of diarrhoea, it may in many cases be cut

short by a simple glass of brandy, or any common astringent, combined with rest and resisting the inclination to stool as much as possible.

But in the more severe forms, where the tormina and tenesmus gain the ascendency of the will, where the stools are of a mucous purulent and bloody character, where the skin is hot and dry, the tongue coated and associated with these, fever — active medical treatment must be pursued or adopted. If the patient be of a plethoric, robust habit, — general bleeding in most instances has a marked tendency to put a stop to, or to decrease the violence of the malady. After

this I have observed in those cases that have come under my charge — that small doses of Chloride of Mercury, combined with opium and ipecacuanha, act very beneficially by calming the irritation, improving the condition of the skin and secretions — together with its antiphlogistic property — check the inflammation. This is equally applicable in cases after or in the absence of bleeding. It is well in most instances to continue this prescription for twenty four or forty eight hours, giving it at intervals of every four hours, watching its effects, and suspending its employment, when symptoms arise contraindicating its use. The dose in

such an opiate, might be given in proportions of Perchlorid. hydrarg. Ipecac. of each three to five grains and opium one. Ipecacuanha is said by some to act remedially, by lessening the peristaltic motion of the intestines together with its revulsive agency.

Another very excellent remedy, after the employment of mercury, or in cases where it is not required is, the acetas plumbi and opium in equal parts made into pills one or two every three or four hours through the day according to the effects it produce, or as the case may seem to require. If he sweats this ought to be the rule and duty of every prudent Physician. It is hard to

say what should be the treatment, without the case is presented to our view. We always minister to the symptoms and not to the name of the disease, for otherwise great and sad consequences would be the result. There is no agent in the Materia Medica that deserves more praise than the judicious employment of mercury. I have seen well marked cases, that have been cured, where no other medicine has been used, with the exception of an occasional dose of Col. Coloc.

Equal to, or next in efficacy is Opium. Without this agent our attempts in many cases at cure would be fruitless. We have no other ~~agent~~ remedy in which there is connected so many important requisites towards the restoration

to health in this disease. It seems in every stage to be applicable, and look a few in which it is contraindicated. Yet in those which it appears unfit, it sometimes produces opposite effects — as in cases of hot and dry skin, tongue and fauces, the very effect in the healthy subject it produces. This symptom is very often and frequently entirely removed by the action of this article.

A very good domestic astringent, which in many parts of the country is very commonly used, is made by taking equal part, or quantities of red oak bark, pine tops or branches or green olives. I have seen it used by persons with the approbation of the physician and the

bitter roots, also the common
running brier root Rubus trivalis
or Rubus villosus black berry —
root —, made by boiling one
or two ounces of the root,
with a pint of water, which
is generally called brier root
tea; in order to make it —
more palatable, it may be
slightly sweetened, and the pa-
tient may take one two or
three ounces at a time during
the day as an ordinary drink.

In the more advanced stage
of the disease, where there exist
a pretty considerable vertiginous
anxiety about the praecordia nau-
sea and vomiting; the counten-
ance pale and anemic, the tongue
red, the abdomen tumid, distended
with flatus and painful to the
touch — discharges, fluid, consist-
ing chiefly of blood and mucus.

The best mode of procedure, in this instance would be cups or leeches over the abdomen, along the courses of the colon, or inflammation. In the latter stage of Dysentery, the best agent known to relieve the distended and tumid abdomen is the Oleum Terebinthinae — This I have seen used often in drachm doses with the greatest satisfaction to the patient and Physician.

Opiates internally, by way of the mouth, or injections per rectum, demulcent drinks; and when the system is very feeble and prostrated, the diet should be nutritious, and to subserve this purpose, beef tea answers our intentions the best.

The action of Opium is sometimes in this and similar affections,

varies from its general effect — often acts as a purgative secondary by destroying the spasm and irritation, consequent upon the inflammation, thus allowing the retained faeces to pass without obstruction, or the opium relieving the strangulation, thus allows the purgatives to act.

We treat all the various forms upon the same general principal — To check inflammation when it is present, to build up the system when the powers of life are declining by nutritious diet and stimulants, to relieve congestion and promote the secretory and excretory functions of the organs, and lastly, but not least, after we have done all to the best of our knowledge to relieve,

leave the balance for nature to accomplish.

In the bilious forms we cannot do well without mercury, the liver being very often much deranged in its functions— we will in some cases have to be quite persistent in its use, then again it may be of no utility. In those cases where there is an over secretion and excretion and excretion— that is, it may not be primarily of any service, but secondarily by correcting the morbid conditions in other parts of the body.

In the 'remittent' and intermittent types— Quinia, combined when, the patient is anemic with some of the ferruginous tonics and gentle purgation, is all that is necessary to eradicate

the disease.

In the Chronic stage the best mode of treatment depends upon our attention to diet and regimen — for without this precaution, it is vain to expect a cure. In this stage the patient sooner or later, becomes anemic, thus indicating the replacing properties of the iron, which may be given in doses from a half to a grain of the Sulphate two or three times a day. A very good combination of articles to prevent the hemorrhage from the bowels and supply the coloring materials in the asthenic and anemic, consist in. Creta, praep. ℥ij, Ferri Ferrocyan. ʒ ss, Ext. haematoxylon ʒ ss, Opii grs. iij, Cinnam. vj grs, Sacch alba ʒ j, made into eight powders, of which one may be taken every three or

four hours. If the case be a bad one, there may be used in conjunction an injection consisting of acetas plumbi grains ten and opium one or two, administered once or twice a day, according to the symptoms and effects. We may also follow when, the disease is determined and obstinate the acetate of lead and opium pill every two, three, or four hours and if it does not succeed in arresting the symptoms the nitras argenti pill or Sulphate of copper in quantities varying from a half to a grain and a half at the same intervals, and if signs of ulceration. Come on the two latter named substances may injected per rectum in larger doses.

Prognosis. When the disease is about to end in convalescence, all the symptoms, become more mild. The tenesmus and tenesmus dimin-

ches, the stools become more fecal, larger and less frequent, or there is a general subsidence of all the marks of the disease, and nothing for the most part left, except a moderate diarrhoea, which passes off in ~~one or two~~ days the course of a few days. The patient sometimes though not often — after all signs of the disease has gone off — complains of cramps, which come on once or twice a week suddenly, and during their continuance causes great suffering.

"But on the contrary, if there should supervene, tympanitis, high fevers with quick and weak pulse, following this, a cold clammy sweat, with coldness of the extremities, the features sunken and depressed with a purplish

hue of the skin, especially about the eyes, mouth and the tips of the fingers — attended with hiccough, delirium, subsultus tendinum &c; we conclude that these are omens which portend an unfavourable termination.

Danger in this disease as in all others, is proportionate to the extent of the inflamation. If we ascertain on pressure that the whole of the Colon is involved, our attention should be directed with watchful anxiety, and unless means be adopted to check the inflamation and the irritation thus produced — in a large majority of cases the powers of life, will sink and the disease end fatally. In sporadic Dysentery — where the patient is well attended to, there is not so much

to dread — nearly always yielding to the influence of medical agents and means. But in the Epidemic Character, we should never be to sanguine, for I have known mild cases to occur in young subjects with constitutions strong and robust, and have been in the care of the best Physicians, who pursued the regular treatment with all its activity, without success.

Anatomical Characters — The lining membrane or the mucous coat of the lower and sometimes of the whole extent of the Colon and rectum — shows marks of inflammatory action after death. It has been observed where the irritation has been transmitted from the large to the small intestines, the solitary or Brunners

glands found in the curvatures of the Stomach and duodenum — have been found considerably enlarged and distended with evident signs of inflammation. There is also a condition existing very much resembling the lesions produced by typhoid fever, the mesentery and the glands of Peyer presenting nearly the same aspect. Ulceration in this disease is more common than any other, except probably that of typhoid fever — the appearance of which presents a smooth surface, or edge coated very often with the membranes that are frequently ejected during the evacuations, such as false membranes, coagulated lymph &c. Then again there

have been instances cited where actual mortification and sloughing in the parts have taken place.
Thickening of the coats of the intestines also is produced, and I remember seeing a post mortem examination of a case resulting from this disease in which there was stricture of the colon — the opening so small that the little finger could scarcely be introduced — it was bound down by a thick, firm muscular band.
Various other lesions resulting from a scrofulous taint of the system, strict diet, deprived nutrition, residing in hade—

ventilated departments exposure &c have been noticed, as producing a dissimilar anatomical lesion. In climates within the tropics the liver is frequently found diseased with hepatic abscesses. &c.

In conclusion, let me remark — that in appreciating the moral and scientific lessons and instructions in the art of medicine — delivered by those who have given us practical and theoretical illustrations in the guide of the knife, when it was required, and its utter repugnance when no good could be effected — by those who have taught us practically the true method of searching out disease, and when we have found it, to administer the indicated

destroying or healing agents — by those who have marked out the path to the most vital organs, that in case of accident or from a morbid action going on in the system, it may be in our power to apply the ligature or the barrier to death — by those who have instructed us, in the nature and action physiologically of articles contained in the materia medica, as observed by practitioners from their experience in the healing art, and from experiments upon the lower orders of animal beings, and finally — by those who have acquainted us, with the means, whereby we can detect fraud and the hypocrisy of the assassin when under the cloak of medical agents, & can one,

express my sincere thanks, and only hope that the knowledge derived from your wise teachings may prove a credit to the institution in your behalf and my future reward — Wishing that this badly gotten up preamble may meet with your approbation, I respectfully conclude, with bright anticipations of being numbered with the profession,

Yours &c

Saml. A. Mould

An

Inaugural Dissertation

On Acute Rheumatism.

Submitted to the Examination

of the

Provost, Regents, and Faculty

of the

University of Maryland

for the

Degree of Doctor of Medicine.

by

William D. Mellen,

of

Maryland.

Acute Rheumatism

Acute rheumatism is a constitutional affection characterized by fever, pain, heat and swelling. It generally attacks the larger joints such as the hip, knee, ankle and elbow, the pain sometimes flies to the muscles, side and various other parts of the system.

Some writers consider that the disease only affects the fibrous tissues, that are of genic nature, and not any part of the joint. It is generally believed that the disease affects the other tissues, the inflammation extending to them from the serous.

The disease sometimes commences with a sense of uneasiness and stiffness in the joint affected which soon increases until it becomes violent pain, and swelling. It generally increases during the night, so that the patient is very

[illegible] the corresponding part of the opposite side is [illegible]. [illegible] the part [illegible] attacked, and [illegible] some other with equal intensity. The pain usually leaves the first [illegible] and is now attacked another. [illegible] the inflammation is [illegible] in [illegible] [illegible] attacks parts that had no immediate connexion with them.

The part affected soon becomes hot and [illegible] and when the pain has been severe, it [illegible] [illegible] the [illegible] of the [illegible]. The swelling is usually [illegible] and [illegible] when the [illegible] is implicated in the disease, it [illegible], [illegible] on account of its [illegible] [illegible]. The swelling is usually much greater in the superficial joint than

in those more peculiar to the mucous. The [illegible] is often very severe; making the most [illegible] man cry out with pain.

The patients dread to move himself, and even the approach of any person to his bed for fear of moving him. Soon after the local symptoms have commenced the patient is seized with rigors followed quickly by increased frequency of pulse, heat of skin, furred tongue, thirst, and occasionally by headache.

The pain is generally of an acute character and proportionate to the amount of local inflammation, though not always so.

The pulse is full, and strong; though not often very frequent, rarely exceeding a hundred. Sometimes however it reaches to a hundred and ten, fifteen or even to a hundred and twenty.

The respiration is not distinct, it seldom the diaphragm extends to some of the intercostal

organs, the appetite is sometimes tolerably great. Though the tongue is [illegible] or not so red as in other inflammatory affection of equal intensity, and is usually moist sometimes indeed it is covered with copious perspiration which often has a very peculiar and sickening odour.

The tongue is covered with a whitish fur the bowels are very generally constipated, the secretions are usually normal, with exception of the urine which is scanty, high coloured and when cold deposits a tabacciform sediment.

The fever usually presents a remittent form exacerbation taking place in the evening; the pain usually increasing with it. The disease often ends in [illegible] even without affecting any of the organs. Sometimes it extends to the heart. Frequently however it penetrates to one of the great cavities, and the

danger to life is very much augmented by pain on occasions.

The organs that is most frequently affected with this disease is the heart & pleura, it is found most on most of the cases that are attacked by this disease; have the heart affected. Dr Hood however thinks that this is a much greater proportion than occurs in this country. The pericardium is not so often attacked as the endocardium and when the former is affected it is seldom accompanied by the latter.

Pericarditis is more dangerous than endocarditis, but the former affection is not so apt to leave complaints behind as the latter. Valvular disease of the heart is a very frequent attendant upon rheumatic inflammation of that organ. The rheumatism then in the heart is said to be well ameliorated, and the first inflammation

of disease; be promptly met and combated by appropriate remedies. Whenever the patient complains of pain in the praecordial region, dyspnoea, and palpitation with a frequent pulse, and anxious countenance, the heart should always be suspected, and a careful examination be made by means of auscultation, and percussion to look for any change that may exist there.

A too hasty diagnosis should not however be made in regard to the existence of endocarditis, from the circumstance of cardiac murmurs being heard in this disease; as they not unfrequently proceed from an entirely different cause. They sometimes arise from the blood containing a too large quantity of fibrin, which element of the blood being deposited on the valves and preventing their complete closure, or thus causing regurgitation into the ventricle, which would produce the sound referred to above.

An anemic state of the blood will also produce the sound; in consequence of the heart not receiving its accustomed stimulus, and therefore acting improperly.

[illegible] should be carefully watched as they are much more apt to have the heart affected than adults.

Next the heart and its sac, the pleura or the part within the chest and covering the lungs will be affected. It [illegible] a more extensive [illegible] in [illegible].

It is however sometimes attacked without the heart being in the disease. In [illegible] this disease, [illegible] affected [illegible] and [illegible] of the [illegible] pleurodynia.

The membranes of the brain are also sometimes affected, but very rarely. When it has been found it has caused from this disease the heart is usually also in a state of disease.

It is [illegible] to depend upon the cardiac disease. Dr Wood thinks that the two are mere coincidences depending upon the same cause. The cerebral affection has been attributed by some to the same cause, namely that has given rise to the disease. Other parts have also suffered occasionally from rheumatism; as the diaphragm and peritoneum but very rarely.

The duration of the disease, differs very much in different individuals, from some lasting only for a few days, and in others for many months. The average is from one to three weeks. It not unfrequently after it has lasted a longer, or shorter time; leaves the joint [illegible] and seizes upon some other with all its original intensity, lengthening the disease very much.

When the disease is about to decline, the pain ceases, the swelling which was at first firm

[illegible] and gradually
subside. [illegible] and [illegible] are apt to
remain for a considerable time after the acute
symptoms have subsided. The fever generally
declines with the other symptoms. [illegible]
[illegible] it is kept up by some hidden disease
[illegible] It is also [illegible]
[illegible] to be kept up by the internal coat
of the arteries being [illegible] inflamed.

The causes of the disease are numerous.
Cold is by far the most frequent of them.
It is said to be very apt to produce the
[illegible]
[illegible]
[illegible] These are the [illegible] exciting
causes of this disease. But they are not sufficient
in themselves to produce it, there must be a
predisposition existing at the time of exposure
a rheumatic diathesis. [illegible]
determine in what this diathesis consist

This predisposition seems to exist chiefly in persons between the ages of fifteen, and [illegible] years old, and the very young are almost entirely exempt from this disease. [illegible] cause of rheumatism is a previous attack; those suffering from it once being very liable to a second attack. The disease is also occasioned by the [illegible] of [illegible] more than those of [illegible]. [illegible] by a previous disease are very apt to have rheumatism on the slightest exposure; if of a rheumatic diathesis. The [illegible] [illegible] is [illegible] a remedy for providing the disease without the aid of an exciting cause.

Men are much more liable to this than women, [illegible] [illegible] given equally to its cause.

There are no lesions found after death
from this disease, that would distinguish
it from any other inflamation. The blood
in acute rheumatism almost always presents
the buffy coat and always abounds in
fibrin. The proportion of fibrin in some
instances [illegible] amounting
in some cases to ten parts in a thousand
the normal quantity being three.
The [illegible]
[illegible]
[illegible]. Effusion is also occasionally
found in the joints. The effusion found
does not present any material alteration
of character. In some instances however
pus has been found and still more
rarely false membrane has been found
in the [illegible] of [illegible].
The lining membrane of the arteries some
times presents signs of inflamation.

When death occurs from the disease attacking the heart various lesions are found. When the valves have been affected, the valves are apt to be found in an abnormal state. The pericardium is sometimes found distended with fluid, and sometimes it is two inches or more adherent.

When the pleura, and membranes of the lungs have been affected with rheumatism, we find [illegible] the same morbid processes that are found in the [illegible] of the same organs:

In [illegible] difficult. The only disease with which it is liable to be confounded is gout, and it may be [illegible] from the latter [illegible] by [illegible] that gout affects children in a [illegible] period than rheumatism, and affects them at an earlier age.

There are other ways of distinguishing gout from rheumatism which it is unrequisite [illegible] ... [illegible] is nearly akin to each other in some of their stages, that it is impossible to tell to which class they belong.

Though rheumatism [illegible] a [illegible] painful disease it is not [illegible] dangerous [illegible], and [illegible] and managed properly seldom leaves any unpleasant consequences behind. It may always be conducted to a favourable termination if none of the internal organs are affected. Such an occurrence adds very much to the danger of the patient.

Whenever the brain is [illegible] affected with this disease, [illegible] is [illegible] more fatal in proportion, than when it attacks any other part of the system. The heart [illegible] more [illegible] than any other organ of the patient [illegible]

early, and proper measures be resorted to; this complication may very generally be prevented, or if present be removed. But if neglected too long, or treated improperly; it is liable to be followed by changes behind ending in fatal hypertrophy, and dilatation.

The treatment of acute rheumatism should be directed antiphlogistic. Bleeding, cathartics, refrigerant diaphoretics, and anodynes are the principal remedies to be employed in the first stage of the disease, whenever, and otherwise unless contraindicated in all periods of the disease.

When the inflammation is more violent bleeding should be carried as far as the state of the constitution and the nature of the patient will allow. The pain should not be used as a sufficient indication for bleeding; as the pain is sometimes very severe when the amount of fever, and blood

inflammation would not justify a use of the lancet. The indications for its use are a full, and strong pulse, heat and swelling of the parts, and a dry skin, and pain and tension.

The bleeding should not be carried to a near approach of syncope unless the inflammation seize upon some of the internal organs; then it should be carried as far as it can be borne. After a time if the active inflammation has not abated it will be necessary to bleed a second time, and perhaps a third.

Local bleeding is sometimes necessary over the affected joints by cups, or leeches, and in very young or debilitated persons applying a few leeches [illegible].

If any of the internal organs are affected occurring during the course of disease, after general bleeding has been carried far enough it is sometimes [illegible].

There are some patients of a debilitation, and irritable [illegible] in which the debility is a [illegible] and should not be [illegible] bleeding [illegible]

The [illegible] pain [illegible] and it does not disappear upon bleeding as in other inflammations but continues throughout the whole disease. We are then [illegible] a [illegible] sign [illegible] the disease as [illegible] the [illegible] of the [illegible] inflammation [illegible] a sign that the bleeding has been carried far enough.

After bleeding purgatives are the next most important in the treatment of this disease. We should [illegible] an active cathartic. It also [illegible] followed after a few hours by a dose of the salts of magnesia [illegible]

Jalap and bitartrate of potassa are also very good agents in this disease. The purgative should be repeated every second, third, or fifth day, [illegible] generally recommended. Dr Sydenham recommends a combination of magnesia and wine of colchicum. The cathartics should be discontinued if the bowels become irritated by their use.

Diuretics are also of great importance in the treatment of rheumatism. Tartar emetic, and nitre combined are very useful agents, not alone for their diaphoretic effect, but they obtain a considerable sedative impression upon the circulation. They may be given in the dose of one thirtieth of a grain of the former, with one or ten grains of the latter. The old method of bleeding to the [illegible] impression [illegible] nature [illegible] considered. The patient is very liable to a relapse after being treated upon such a plan in the acute form.

in consequence of the relaxed condition of the skin.

Opium, and [illegible] are [illegible] given at bed time to procure sleep and allay [illegible]. A grain of each may be given, and [illegible] may be repeated at the end of two hours. Dovers powder may also be given [illegible] [illegible] recommended given [illegible] Dover powder after the pains have lost their tension, especially [illegible] the second [illegible] the remedies [illegible] should not produce the desired effect at the end of ten days, or two weeks, it will be advisable to consult a [illegible] in the alteration of [illegible]

I should not however be carried to intimation [illegible] on the pains become the least [illegible] take place, the patient (although he may have a sore mouth) may also congratulate himself upon getting well with a second [illegible]; for that [illegible] [illegible] [illegible]

[illegible] effects. Colchicum has been very largely given in this disease and [illegible] knowledge. When we administer colchicum in chronic cases it gives [illegible] for it sometimes accumulate in the system and suddenly explodes with almost fatal [illegible]

[illegible] is a very good one. I have seen it employed in several cases in the Bal infirmary and always with very great benefit. He recommends after full bleeding in the robust, and without that [illegible] in the weak; eight, or ten grains of calomel with a grain, or a grain, and a half of opium [illegible] at night, and followed on the morning by [illegible] of [illegible] sulphate of magnesia or castor oil for evacuations from the bowels.

Fifteen or twenty drops of tincture of colchicum

is to be given along with these remedies three times a day combined with a tea draught, and four or five grains of Dovers powder. According to his statement the patients generally recovered in about a week.

Various other plans of treatment have been used in rheumatism. But as the modes of treatment of which I have spoken are the ones now used by the profession it will not be necessary to describe them. Bleeding, both venesection, cupping, blistering, purgatives, tartar emetic, opium, alkalies, and alkaline remedies have all been used with more or less regular success; but are now very rarely used.

The local measures to be employed are to keep the affected part covered with flannel, lime water or cotton. If the pain is confined to one joint it may be necessary

to apply leeches to it. But if the pains are migratory it would be expedient to suppose to be such manner of the inflammation should be found tender in the course of the disease, cupping or leeches should be applied to it.

After the disease has declined, and the joints remain tender, and swollen, warm, and rubifacient bathing will be found useful. At a still more advanced stage when the disease threatens to become chronic repeated blistering may be used with very great benefit. If the pains are severe at the same time, acetate of morphia may be sprinkled upon the denuded surface with great relief to the patient.

Dr. Kerscheneberger of the navy recommends cool cloth dressing to the affected joint.

But this is a remedy that I should be afraid to employ for I think it would

[illegible] apt to drive the inflammation to some of the internal organs, and add very much to the danger of the patient.

In [illegible] [illegible] [illegible] [illegible] [illegible] after the fever and inflammation have subsided

An Inaugural Dissertation

On

Small pox

Submitted to the examination

Of the

Provost Regents & Faculty of Physic,

Of the

University of Maryland

For the Degree of

Doctor in Medicine

By James M. Mudd
of Md

To Prof. Samuel Chew, M.D.

In testimony of his

Indefatigable Labours, in expounding

The

Principles and Practice of Medicine

In the

University of Maryland,

These pages are

Respectfully Inscribed,

By the Author,

Balto. Feb. 12th 1856

In order to comply with a Statute of the University of Maryland which compels every Candidate for graduation, to present for examination to the Board of the Faculty a Thesis of his own composition, I have revolved in mind many and various subjects connected with the science of medicine, in order to select from them, one of the most interesting and at the same the least abstruse and complicated to make up the constituents of this Thesis. After weighing well the comparative suitableness of the many topics which have presented themselves to my mind I have waived a little my first intention of choosing a plain uncomplicated subject, and have selected the subject of Small Pox, as being the most interesting and important of all that class of eruptive fevers of which it represents a type and standard.

I might regard it as a matter of very little moment what I would make the heading of this discourse I am about to write, because I feel conscious that whatever might be the subject matter that an honest zeal is the only qualification I possess commensurate with the importance of the task

I know that beauty strength and consistency of arrangement will be wanting. I know that to advance a new opinion at so late a period of the long agitated controversy about this disease, would be presumptious if not impossible. But whatever argument I may advance separate and apart from theory and speculation, will be vindicated from a firm conviction of its truth — will be derived from authors the most reliable, and will be those opinions according to my humble judgement most consonant with a sound philosophy.

The origin and early history of this disease appears to be involved in obscurity. it seems to have been known to the Ancients long before literature and the science of Medicine had advanced to that perfection which would enable them to write any correct history of it, or to trace it in such a way passable to that point from whence it first commenced to rage.
This disease certainly had been known many centuries before a description of it was attempted. Galen in the ninth century seems merely to have

noticed it in his writings, omitting the most important part of its history, that respecting the cause of its first production. His description is quite clear however, though his theory is childish in the extreme and his practice very bad. It can only be assumed however that if he had collected and recorded what was then known of its origin and later and more observant writers had added new facts to those already described, then the whole would have been more than an isolated and confused relation, which would afford no reliable data, whereupon to estimate its pristine origin. Whatever may have been the agent which caused its birth, whatever may have been the remote or proximate causes which first called it into existence, no man can tell, and our best efforts to solve this mysterious and important problem, must be nought but speculation. Writers now-a-days differ widely in their opinions respecting the pathology of small pox. Some maintain that it is an evil sent by Providence for the special punishment of the human family, and that it has a supernatural origin, some argue more philosophically that small pox may be bred in the blood

like gout or rheumatism, independently of any internal agency. These early impressions have long since exploded, and it is now universally admitted that it sprung from some fortuitous combination of causes, such as particular circumstances of the body or of the atmosphere which surrounds the body, of the aliment, secretions, sleep, exercise or mental emotions.

I am inclined to the opinion that the morbid condition under which the system may have been labouring, could only act as predisposing causes to this contagion, that although the human system was the only medium from whence all subsequent infection arose, yet the condition of the atmosphere as respects temperature only, acted the most important part in generating this contagion. The most plausible conjecture to my mind is, that an unique condition of the atmosphere, operating upon previous infection or disease, chemically created the mortific vapor or current, and that this miasmatic emanation surrounding our bodies, the lungs and the skin imbibe the deadly germ, which generates, multiplies and matures in the human system. Of fevers of dif-

ferent grades of intensity, both epidemic and contagious are caused by the noxious effluvium arising from the action of heat and moisture on vegetable matter. The variety and destructive tendency of the fevers produced, can only be ascribed to the variety and virulence of the morbid elements imbibed into the system. These modifications of miasma then must be caused by the intervention of one or more morbific constituents.

It would certainly be illogical to argue that the intermittent, bilious and yellow fevers, were produced by the same proportions of the same elements. And if these facts are admissible I can find no obstacle to the belief, that the admixture of some other extraneous or foreign taint would generate the variolous fever. I cannot conceive that upon such reasoning the doctrine of its spontaneous origin could be maintained. The same coincident and concordant circumstances which first produced it, may and doubtless have happened again, and the poison has originated spontaneously as at first. Here we are compelled to wave the solution of another very important question which arises. How is it known that it has

originate more than once except by infection?

The character of the poison itself would predict the possibility of a satisfactory explanation of this question. We can only say then that it is not improbable, from the preponderation of arguments that could be deduced in its favour. Yet it is an hypothesis, and will perhaps remain forever unsettled by positive facts ascertained from observation.

The occurrence of the disease in the interior of a healthy district would be no argument substantiating its spontaneous origin, after the disease has been once known to occur and its insidious character properly understood. Because this poison is portable it is communicable from place by persons who are themselves proof against its effects. It travels upon the winds and after leaves the marks of its desolating influence in the direction in which that element moves. Though as hot, cold, moist, and dry atmospheres, would be injurious or unfavourable for its development, it might pass over both mountains and across wides seas, and across an immense expanse

of country without impairing its deleterious influence in its course, yet when coming to climate & soil favourable for its propagation, it leaves alight, and from that point commence to rage with frightful violence. When smallpox is thus known to occur, it is calculated to stagger the belief of its having originated but once except by infection. The universality of its diffusion also, would almost preclude the possibility of its second formation, even if the same coincident circumstances were to obtain which caused it the first time.

Having thus briefly premised the origin and character of smallpox contagion I will next proceed to say something of the methods of prolection, which has practiced by the profession, before entering upon a description of the disease. These methods of prevention, include one part of my subject which seems with the most profound interest, because it has evoked the investigation and research of men of science all over the world. It is a subject upon which the invention and speculative genius of the man of medicine has achieved its brightest trophies

and received its highest reward, and has bestowed to mankind one of the greatest benefactions that the science of medicine has ever bestowed upon the human race. For since that period when the science of medicine first began to emerge from the dark clouds of ignorance and superstition under which it had been so long veiled. When the fruitful fields of the science were first cultivated by men of learning genius and dedication. When the worthies and others of the Escalapian school first unites their emulation and talent for improving their science & benefitting mankind. Down to the present advanced stage of the science, no discovery has been made which has contributed so materially to improve the condition of mankind as Dr Jenners discovery of vaccination. A scourge which has crippled the most powerful nations on earth, which had destroyed fleets and armies, suspended manufactures and commerce, and spread terror and dismay throughout a great portion of the habitable globe, has since the discovery of Jenner in 1798 been reduced to a disease mild in form, perfectly tractable, and under the control

of medicine — nay, often its occurrence is often attended with such little inconvenience as not to require any remedial attention.

Vaccination was not a discovery of chance but one resulting from observation and confirmed by experiment. Glimpses of a truth so remarkable as the protective power of vaccination, must have at least bewildered on ridiculous even to the most credulous. But the principles involved in his experiments were gradually matured into a rational and scientific form, comprising nought but the principles of a sound philosophy.

Like all other discoveries of importance, this had its opponents to contend with. Objections were urged from various quarters, but probably only by those in whom ignorance and prejudice were sufficient to exclude the lights of reason and philanthropy.

It would be enough to say of these adverse arguments, that some were frivolous and foolish and others false and ill founded. The discovery triumphed however, maugre all cavils, and in six years from its first pro-

-mulgation, it was heralded to all quarters of the world to gladden the hearts of civilized man, wherever Small pox was known.

To accord to each method resorted to for the prevention of this direful malady — Inoculation and Vaccination, their true merit, it would be enough to say that the latter is universally practiced, while the former is prohibited under a heavy pecuniary penalty, in some parts of this Country.

The efficacy of inoculation in mitigating the severity of the disease with those who were submitted to the operation was no doubt equal to, quar. Yet after vaccination was thoroughly known and understood, it proved to be so far a superior expedient, that inoculation was not only considered unnecessary, but in a vast majority of cases totally unjustifiable.

We know that by inoculation we give to the individual a modified form of variola, which though directed at that hazard and suffering to which the unprotected would be otherwise doomed; yet the contagious nature of the disease, which of all its characters are most

most to be deprecated, are not in the least diminished. The furnish therefore the individual thus protected with a partial immunity for himself, and a path pass to disseminate the disease throughout the widest area of the land. Without making worse his own condition he is empowered to invade the contagion to all around him, to contaminate the pure atmosphere with the essential requisites of an universal epidemic.

The disease therefore might be produced artificially in a greater number of persons than would have contracted it naturally had inoculation never been thought of.

The error in comparing the number of fatal cases occurring after the two methods of prevention have been practised must be egregious. For if on a ship-board there were five hundred persons inoculated with smallpox, according to Dr Gregory's estimate there would be but one fatal case. But if an law could be enacted, which would subject all the inhabitants of the earth to the same operation at the same time, then the disease would be easily

minates. And the law would be more conducive to the weal of mankind than any other human law. But to enact and enforce a law by any measures whatever, would be as impracticable as the performance of Quarantine or any other prohibitive measure would be, if it were in a position to prevent the introduction of the disease at any port a ship might be destined, even should the disease have never visited that place before. But these are idle speculations availing nought here. The wise enactment of Health laws, the rigid enforcement of Quarantine and the protection afforded by exposing the Cholera virus, do not confer a partial exemption from this disease.

There are always remaining a large class of persons, who either could not or would not if they had the opportunity, avail themselves of any prophylactic expedient. Hence inoculation a Chyle resorption the diffusible, contagious nature of the poison imparted a channel as generally evolution in various ways not only is it transmitted from person to person, but in its

would be a fruitful source of conveying it, but through the air, through all inanimate articles — fomites, which they might have a different and distant sense of the same.

It would be to multiply the foci of contagion, and disseminate the disease farther and wider, than the slower progress of nature would probably have ever reached. Just as if many lighted cigars were thrown at different places in a dry corn field, it would certainly envelop the whole in a conflagration sooner, than if by accident the lateral fire applied at one point, when the work of destruction would have to traverse a continuous meandering route till the whole field was destroyed.

It would appear therefore from these observations, that the mortality among the people generally, is greatly increased by inoculation. I consider that it behoves me now to say something of vaccination, tho' it might subserve all purposes if I here to dequit the consideration of vaccine, and make some practical suggestions, regarding

the most correct manner of testing the matter.

The notion that vaccination loses its preventive power, which has grown out of another notion, that our constitutions change every seven years, must be fallacious and untenable. For one having measles, whooping cough or yellow fever renders those as a general rule not susceptible to a second attack, and so with Small pox. And I cannot see by what logical reasoning we could prove it contrary of vaccination. All mankind are born susceptible to Small pox, and we are equally so at all ages, until this susceptibility is altered by vaccination. Many demur against the correctness of second, attacks, except when the first attack was very mild - not sufficient in intensity to absorb the whole amount of susceptibility. Now this principle in my opinion is quite applicable to the vaccine disease.

The security afforded may be permanent through life, or only temporary, or no protection at all, according to the disease imparted is genuine contaminated or bloody & furious. It is also thought necessary to get the matter

frequently run from the Cow, from the impression that its transmission from one human being to another diminishes its protective power.

This must also be understood, or be known that the poison of syphilis, although now discovered as so easily a virus as small pox, yet the disease produced by inoculating with the syphilitic virus of the present day, is found to correspond with the disease observed by the earliest writers on this disease. This poison or vaccine has the power when applied to the human body, propagating or multiplying itself, and is no more modified by its transmission from person to person, and from generation to generation than is the itch or erysipelas.

Dr. Mortlock who has had ample opportunity of investigating this matter, and to whom sagacity honor and accuracy of perception would be entitled to the highest credit, thus expresses himself upon the subject: "I may say" that the vaccine virus, which has been used at the Royal Dispensary here (in Edinburgh) and in other parts of Scotland, for a series of

eighteen years still continues to produce not those who are inoculated with it, the very same appearances which it produced on the first trials that were made with it, and that these appearances agree exactly with those which have been delineated and described by Dr. Jenner as characteristic of cow pox, and I know also he continues, that the appearances of the vaccine vesicle produced by this matter, which must have passed through a succession of at least nine hundred individuals, agree exactly with those exhibited by vesicles by inoculation with the reminequine matter.

The opinion that the vaccine by continuous use is deteriorated, and that by transmission from man to cow is regenerated and its lost energy restored, must be untenable, and to admit it, we must admit an isolated and unparalleled feature in the character of all diseases which are communicable by contagion or inoculation. If the vaccine matter when properly applied goes through all the stages of regular vesic-

ular pustular and desquamation in the same order in which natural small pox does, then the vaccine matter must be good, and the only question is, whether it has made a sufficient deep constitutional impression, which can be ascertained by the two following tests.

First, some days after vaccinating one arm vaccinate the other, and if the pustules go through their stadia and mature together it is an evidence of a constitutional impression. Second, revaccinate, and if the first is good it will either resist the virus altogether, or if the latter makes an impression, it will go through the stadia precisely as varioloid.

Now it appears to me that the number of pustules created, and the degree of irritation they produce, bear a proportional ratio to the constitutional impression made and the anti-variolous powers of vaccination.

And I would suggest therefore, that the practice of making but one pustule, to offer persons to please patients who do not wish their arms to be much scarified, does not produce a sufficient irritative fever, and very

often the taking away some of the matter before it becomes purulent, may impair its constitutional impression, and considerably if not entirely destroy its power to prevent Smallpox contagion.

There are also many mooted questions in regard to the genuineness of the matter employed, and the correct diagnosis of the local affection produced. It is certain that if the pus or dried scab from a simple ulcer, be inserted beneath the cuticle of a healthy individual in the same manner in which vaccine is, the stages and termination of inflammation that follows, will be much aggravated, and the appearances presented thereby will be widely different from the series of successive symptoms presented by the more trivial wounds or scratch.

These phenomena resulting from the use of spurious varioloids matter are doubtless often mistaken for the true varioloid symptoms. There are also other causes of failure even when the matter used is good although that may be decomposed by long

keeping. The existence of a suppurating ulcer on some parts of the body particularly about the head and upper extremities, would buy off or delay the operation, by attracting by metastasis the morbific matter of contagion to the seat of previous diseased action, and nature in her efforts to get rid of any redundant or offending material which the circulating fluid might contain, will direct herself of the vaccine virus through the agency of the process of suppuration, in the same manner that the Smallpox virus is eliminated from the system, during the suppurating stage of that disease.

The presence of some cutaneous disease is also frequently a cause of failure, and indeed it would be fair to presume, that the existence of a morbific tendency in the blood would prevent the ingress of the poison, when no perceptible pathological condition of the system exists. This to my mind seems almost established by the fact, that after repeated unsuccessful attempts to vaccinate, the individual would finally take the disease and

go regularly through all its stages. If there was any disease existing at that time, the failure would unhesitatingly be ascribed to that cause. But in the absence of any pathological condition of the system, the defect must be in the lymph which either does not contain the relative proportion of those elements which constitute a healthy standard, or is embued with some foreign taint which though innocuous, in a time to health, might yet neutralize or destroy the virtues of vaccine. Although vaccination when properly performed is no absolute guarantee against Small pox contagion, yet it is reasonable to suppose from the facts above mentioned that many of the cases are false cases of variloid, are nothing less than the genuine Small pox, no more modified than it would have occurred in prophylactic expedients have been resorted to.

It is my opinion when variola does occur after vaccination, that it is modified or aggravated in proportion to the mildness or severity of cowpox, and that the real security to be derived

or the height of exemption from Smallpox, is not obtained, unless the system be thoroughly saturated with the unadulterated vaccine matter.

It is thought advisable to revaccinate at least once in ten years or oftener. During an epidemic, from the opinion that the influence of the vaccine disease gradually diminishes, until the system that was once exempt, regains its original susceptibility to Smallpox. That the prophylactic impression when once obtained is counteracted by the influence of changes that are continually going within the body, is denied emphatically by many reliable authorities. Yet most observers hold that this contingency although improbable cannot be excluded from our reasoning from some well attested facts which tend quite greatly in support to this doctrine.

When vaccination is performed at the proper period of life, and there are no opposing circumstances such as I have just mentioned, it should guarantee a sufficient season from this contagion, that as revaccination is productive

of slight and temporary inconvenience, it should in all cases be recommended as a good precautionary measure, for if a partial exemption only is afforded by the first vaccination the system would be as susceptible to the influence at a second vaccination, as to variola if he was exposed. Again it affords an additional opportunity to those who either did not receive a sufficiently deep impression, or who received no immunity on account of being vaccinated with spurious matter.

When several individuals are submitted to the same process of vaccination at the same time, some may receive an everlasting freedom from subsequent influence of the variolous contagion, whilst others may receive a partial immunity, and others remain as capable of contracting the disease as before.

This shows conclusively that there are various and different degrees of susceptibility to the contagion. A person may have syphilis or gonorrha, and cohabit with several women, each woman in this case would be inoculated from the same virus. Yet some of them would have

the disease with great severity, others would have it lip severe, and others again would suffer very slightly, or totally escape. Here we have different grades of disease generated by the same specific poison. This inequality is readily ascribable to the unequal quantities imparted to the system, to the constitutional bronnepp to the disease, or to atony of the absorbent system. The difference between the distinct and confluent forms of variola is attributable to these same causes, namely, to the quantity of poison imbibed into the system, to constitutional idiosyncracy, or to particular conditions of the system, which are calculated to modify these results.

These same phenomena will obtain when persons of apparently similar constitutional diathesis are exposed in the same manner to any contagious disease.

It occurs to me that the contagious nature of the two diseases (Cowpox and Syphilis) are so nearly analagous, that it would be inconsistent to argue, that the virulence of one would

be diminished by its intermixture with the human tissue (which it is known to generate an increase), and the other retain its original malignity, undiminished, although both subjected in the same manner to the operation of internal agents, that are equally calculated to produce an alteration in their specific results. As to the practice of passing the lymph frequently through the cow, in order to perpetuate its antidotal qualities, it may be out of place to make a few brief remarks. If as Dr. Heim asserts there are five different kinds of spurious cowpox, all communicable from the teats of the animal to the human being in the same manner in which genuine cowpox is transmitted, then this practice must be deprecated and if we admit it, there are two important considerations thus present themselves. First. That a spurious is often engrafted so much resembling the real that it is difficult to distinguish them, and which is no protection against smallpox. Secondly. That it would be unsafe to resort rashly to lymph recently obtained from the cow even if its protective powers

were somewhat impaired from continuous use.

This lymph may differ in character and qualities according to the source from whence it has been obtained. Healthy and well fed children for instance, afford a lymph which is much superior to that which is obtained from weakly and ill fed children whose blood is thin and poor. This lymph being a product of the blood, it is obvious that the purer the blood, the purer will be the lymph obtained from it.

In regard to the recurrence of this disease, it is now universally admitted that one having variola is no absolute guarantee against a second attack, neither is unequivocal vaccination always a positive immunity against this contagion. But there are anomalies in the history of contagious diseases which have baffled the skill of the ablest theologists to account for, yet they are admitted as undeniable truths. For when we see smallpox occurring a second time after a severe attack of that disease, we cannot hesitate to be=

lieve that the same may occur after perfect vaccination. But although cases of Small pox after vaccination are far more frequent than second attacks, yet they are generally so mild that they cause little apprehension while the mortality from second attacks are nearly one fourth as great as first attacks are to the unprotected. I maintain that that the greater number of those successfully vaccinated remain completely protected from Smallpox during their entire life, and that the rare instances of a second vaccination going through the same stages as the first, are unaccountable deviations from the general rule, of the stadia of the local and constitutional affection occasioned by the application of the variolous matter. For present unmistakable evidence of real vaccine. It appears to me and I can not see by what process of reasoning the contrary could be established, that those persons in whom variola does occur after vaccination, are those who from idiosyncracy of constitution would be liable to con-

trace the disease after having once had it.

The proportion of mankind who exhibits this peculiar idiosyncracy is very small.

It would be very interesting to determine positively, whether this constitution of inaptitude to cowpox, denote a like inaptitude to receive and develop the varicolous poison. It is at all times difficult to arrive at the truth on a question of this nature, and now that inoculation is forbidden we may despair of ever arriving at any certainty concerning it.

It is a question that has been long past to rest that there are rare instances of individuals who are non-susceptible to vaccine or variola, others again in whom vaccine cow never be accomplished, yet who are highly susceptible to variola. And here again we are compelled to admit another very curious and unaccountable phase in the character of this disease viz, that the inability to take vaccine is no guarantee against small pox. Concerning these anomalies it would be superrogatory to dwell

as a philosophical solution of them (if such could be arrived at) would be of but little practical value.

After having premised thus far, the origin and character of the poison, the methods of prevention, their discovery, adoption merits &c. I now proceed to describe the character of the disease as produced in the human system by this poison.

We define Small pox then to be a disease produced by a morbid poison or miasm, which after a certain period of latency develops eruption on the surface passing through the stages of pimple, bleb, pustule, and scab, with certain other concomitant or succeeding affections, which run a stated course, and having exhausted itself removes from the constitution the susceptibility of a like attack.

Small pox is divisible into varieties, the terms confluent and distinct, are perhaps two of the most important, though we have a third division which although devoid of that danger and fatality which attends the other

two forms, yet is highly deserving a portion of our consideration — I mean modified — Small pox. Each of these varieties is divisible into three stages, Incubation maturation and decline. First, the period of incubation. This is the latent or dormant period that elapses, from the reception of the variolous germ, to the development of the eruption. The first few days may be passed without the patient being conscious of any change in his health and feelings, in other cases there are manifest evidences of a morbid change going on. As the stage of incubation advances his nights become restless his spirits low, and he has feelings of giddiness sickness and alarm, and he is oppressed with languor and lassitude. These are the symptoms which commonly foretell the impending storm that is brewing. This stage lasts about twelve days generally, tho it admits of some latitude, and the extremes may be stated as ten and sixteen days. Following the initiatory stage we have fevers accompanied by the usual evidences of pyrexia, a quickened pulse head

of skin, pain in the back and limbs, the urine is scanty and high coloured, and there is great restlessness. It is highly important for us to prognosticate apart from the previous symptoms, and the evidences of a prevailing epidemic whether or not the fever that is breeding is variolous. One of our most important guides in diagnosing here is the sickness of stomach which is always present and is accompanied by tenderness over the epigastrium on pressure. There is irritability of the stomach here, but not inflammation, for the vomiting is unaffected by bleeding, and yields when the eruption shows itself. The pain in the back and limbs is also greater, than the same amount of constitutional disturbance in other diseases would denote. It has been known to occur so sudden and intense, that people carrying a load have been known to drop down in the street. Lumbar pain is one of the most common precursory symptoms of variola, and is often of a great degree of severity, and is not met with in rubeola or scarlatina, and as these two diseases simulate in

a great measure Smallpox. The presence of lumbar pain often assists materially, in the diagnosis of this disease.

Excepting these symptoms such as headache stupor delirium &c. frequently accompany this stage, though they are occurrences of little importance in leading us to a correct conclusion, in as much as they occur in other forms of fever, and is by no means a leading feature in Smallpox. These symptoms become aggravated, and the disease being modified, gradually assumes the appearance of the second or eruptive stage. The duration of this stage is never less than forty eight hours though it may be protracted by reason of relapses to three days, before the full development of the eruption over the whole surface. Minute papulæ sensibly elevated above the surface of the skin show themselves at first on the face and forehead generally, tho' it has been known to appear first on the lower extremities. Generally speaking, this outbreak of eruption affords great relief all the symptoms become in a great measure relieved This fact

shows quite clearly, that the symptoms, such as I have been mentioning, depend not upon inflammation but upon vascular distension.

The organization of the smallpox pustule is very curious and interesting, the seat of the inflammation that precedes the development of the pustule, is in the cutis vera.

From a central point the inflammatory action proceeds by radiation on the surface, penetrating to a greater or lesser depth beneath the epidermis. And in the seat of the first inflammation there is found a substance of the consistence of pulp or thick mucus. This substance is not considered as identical with pus — the product of blood and tissue active by disease, but as the product of a specific action of the vessels. It has been called the varicelous slough. The vesicle is divided multilocular, as a poppy head into numerous cells. A filament of cellular tissue binds down the central portion of this vesicle to the parts below giving it that umbilicated appearance which is so important as a diagnostic.

The fluids (lymph and pus) which accu-

malar, and distend the cells of this vesicle, destroy at length the filaments of cuticle that imprison it, and it bursts discharging a pure but matter, of a yellowish colour and cream consistence. These vesicles having ripened burst and discharged their contents, are succeeded by scabs which dry up, in a healthy state of constitution in four or five days.

Portions of the cuticle are actually destroyed and sloughed away, the vessels being, when cicatrization is completed, the skin presents the appearance of pits or pocks, with a diffused bluish colour of the surface. This last however wears off, but the depressions are permanent and the face is always more or less disfigured. Sometimes the contents of these vesicles are allowed to flow down the side of the face and remain there, this neglect on the part of the nurse is most always repaid by the dreadful disfigurement which it produces.

Destroying the cuticle which it covers, the face after cicatrization is accomplished is found to be pitted in grooves of irregular shapes marking the course of the poisonous fluid that has been

pounce out. When the disease is perfectly normal in its course, in a patient of habit, no unsound-ness of constitution, and has an unobstructed supply of blood, these pocks mature in seven days. In the confluent form of this disease this process of maturation may occupy eight days, and in the modified form of variola, or that following vaccination, the pocks will sometimes mature perfectly in five days.

A certain amount of fever accompanies this maturation stage even in the milder forms, the quantity depending upon the amount of eruption, the habit of the patient and the condition of his mind. Something depends also upon the season, diet, temperature of the room, &c. This stage is often accompanied by an extending tender state of the surface. This is a very good sign although attended with much temporary inconvenience.

It might not be inappropriate before dismissing this part of my subject, to say something of the inflammation of mucous structures, in the progress of Smallpox. In many of the confluent and semi-confluent cases, the mucous mem

brane of all those parts to which the atmospheric air gets access (the nose mouth larynx and trachea) are occupied with eruption.

This eruption commences to appear in the shape of white points on the tongue, palate & velum pendulum, Hoarseness and alteration of the voice indicate that the same condition extends to the mucous membrane of the larynx and trachea. This complication occasions great pain in swallowing, and in bad cases cough and dyspnoea, as the disease advances there is expectoration, and later in its progress a copious viscid secretion takes place from all the affected structures. The ulterior consequences of this state of things occasions far greater mischief, than the local affection would seem to indicate.

The tumified condition of the larynx and trachea, prevents free access of air to the lungs, and the deleterious consequences appear in every part of the circulating system. The injurious consequences of the circulation of unarterialized blood are too well known to require even a passing remark. Suffice it to say that all the

existing symptoms become markedly aggravated, and the patient is in imminent danger of losing his life. It would be inconsistent to believe that such a fever as I have been describing should rage — expend its whole violence on the skin and contagious mucous membranes, and not afflict the great internal organs of respiration. These are often seriously implicated, although this disease, from its fatality, is singularly exempt from thoracic and abdominal complications, particularly the latter.

The cellular membrane and the nervous system also sympathizes in the great work of destruction that is going on. To give each of these complications a separate consideration, would be far surpassing the intended limits of this thesis. Recovering from Smallpox may be retarded by weakness of habit, by cold, and the predisposition to scrofulous disease.

When these conditions are present, the skin may be left dry, and scaly, and the scabs may be adherent. This may be caused by or depends upon the setting up of a low form of secondary fever. I will now pass on the examination of the

Pathological Lesions. These are confined principally to those which the larynx and trachea exhibit. The lungs however exhibit the usual evidences of inflammation, engorgement, numerous infiltration, hepatization &c. There is fluid effused into the thorax, which seems to result from acute pleurisy. Pathologists differ widely in regard to the existence of varioloous pustules on the mucous membrane of the intestinal canal. The experience of the Smallpox Hospitals in France, would seem to favour the positive side of the question. Sir Gilbert Blane also reports several cases which would favour the belief of its involving the stomach. He observed inflamed, enlarged, and ulcerated patches, in and contiguous to the colon, much resembling those which occur in Typhoid fever. Having thus hastily run over several important topics, without having allowed them that consideration, which their importance would seem to demand, in consequence of being allowed more scope to dwell upon the therapeutical part of my subject, I now proceed to tell what is known concerning the Treatment of Smallpox. The power of medicine over this disease

is less efficient than it is in most any other. Nevertheless medicine does exert a certain amount of influence over the course of this disease.

It is a matter of great moment to understand the amount of influence (great or small) that remedies will exert, in order to fulfil that greatest law in therapeutics, namely, to do no harm.

For although the very best treatment may do no good, yet improper treatment will always do harm. Our treatment must be directed always by the tendency nature assumes in getting rid of an offending matter in the blood.

We know that the system has imbibed a morbid poison, which somehow or other must be got rid of, and consequently we study to place the system in the most favorable circumstances for the safe elimination of this morbid matter. The indications most to be respected for the accomplishment of this purpose are.

First. To moderate the violence of the febrile excitement whenever we meet with it.

Second. To check and relieve local determinations of blood at whatever period of the disease they arise. Third. To support the powers

of the system, when it flags, either from the malignity of the poison or the long continuance of the disease. Fourth. To combat by appropriate means, concomitant diseases.

The sources of danger in Smallpox are quite numerous. There is hardly any condition of the body, or of the organs which compose the body, or of the atmosphere that surrounds them, which may not be under peculiar circumstances, sources of danger. The distinct Smallpox is a disease of comparatively little danger. Confluence is always unfavourable, especially on the face, which if the resides be white and pasty, no reasonable hopes of recovery can be entertained. It might be remarked that the condition of the mucous membranes, of the fluids, and of the nervous system, might under particular circumstances impart a fatal or a favourable termination. But as these are events, not concomitant with the usual progress of Smallpox, they may be combated by a rational expectant treatment, such as the character of the symptoms would indicate. In the initiatory fever of Smallpox, the antiphlogistic treatment is always to be pursued

The surface is to be kept moderately cool. A brisk cathartic composed of four grains of Calomel, with eight or ten of the compound extract of Colocynth, may be given with great advantage when there is great disturbance of the general system. Saline draughts may be taken frequently, in a state of effervescence, and a pill containing three grains of James' powder, may with propriety be administered. But if the pain in the back, head, and epigastrium, continue unremitted, blood may be taken from the arm.

The symptoms which would indicate the abstraction of blood are, a sharp or full pulse, severe head ach, accompanied by epistaxis.

When these conditions exist, the practice of blood letting, may not only be considered beneficial, but absolutely indispensible.

In regard to the quantity of blood to be taken, the circumstances of the case, can be the only correct guide. The object is to relieve the over distended vessels of a load of inflamed or stagnant blood. When evidences of local congestion supervene, the quantity of blood drawn should be sufficient to afford relief to the symptoms.

If head-ache and suffusion of the eyes predominate, leeches may be applied to the temples, to take off the strain from the vessels about the head.

Purgatives and laxative draughts, are always useful at this stage of the disease, to divert the from the head and surface, to the mucous membranes of the alimentary canal, which are so seldom involved in the ordinary course of small pox. If the stomach in the initiatory fever remains very irritable — rejecting everything, even the saline draughts, opium may be tried, and if it should also offend, mustard poultices may be applied to the epigastrium, and to the feet. But if there is good reason to believe, that venesection has been carried too far, the circulation, becoming languid and feeble, the skin pale, and the extremities cold. The only treatment then is, to administer stimulants, and cover the patient over with warm bed clothes, and apply sinapisms to the epigastrium. An ounce of wine, drops of laudanum may be given, and repeated every four hours or as long as necessary. If the process of maturation of the pustules proceed favourably, you can do

no more than relieve thirst by cool draughts, and sooth the bowels by an occasional dose of castor-oil.

The patient should be placed in a large well-ventilated apartment, and covered lightly. The diet should consist of tea, bread and milk, arrow root &c. A roasted apple, an orange, or some other sub acid fruit may be useful (if agreeable to the patient) as adjuvants to the antiphlogistic which are employed.

To the immortal Sydenham is due the credit of introducing this cooling plan of treatment in small pox. Previous to his day, it was managed by the heating, and stimulating course of treatment, which must have thwarted nature, and added to the malignancy of the disease rather than aided her in her efforts.

In order to prevent pitting various measures have been pursued. Firstly such as opening all the pustules as they appear. Secondly of applying lunar caustic to the pustules so as to destroy them at an early period of their growth. By this practice it has appeared, as we have of doing good, unless there were scars of serious

disfigurement, the remedy would be worse than the disease. The latest and best mode of treating the surface during this stage, is that of applying mercurial plasters. This mode is practised in the Fever Hospitals at the present day.

In a large proportion of cases, this practice is inefficient, and recoveries from confluent small pox, are yet to be seen which are not more or less pitted.

During pustulation, the surface may be dusted over with some simple dry powder, such as starch or chalk powder. Milder unguents, such as cold cream, or simple ointments, mixed with a little oxide of bismuth, subserve a very good purpose in soothing pain and irritation when applied to the dry surface.

The period of maturation is the most dangerous in this disease, and is deserving of the most watchful attention, because in this stage, some severe and fatal complications of internal organs usually supervene. Inflammation is most apt to set up in the air passages and lungs, and should these become thus involved, the treatment must be that which is best calculated to meet the symptoms

independence of the general course which is directed to the system at large. The declining stage of Smallpox requires little else than attention to the state of the bowels, and care, lest by great indulgence of the appetite should cause a relapse of fever. A warm bath is always necessary before the patient rises again in society. Warm diluent drinks, and diaphoretic mixtures, are advisable to rouse the kidneys to action, and promote a more healthy state of the surface. A short time antecedent to a full and perfect recovery.

And now Gentlemen I must needs stop. The task that has been assigned me, I have endeavoured to accomplish, with what degree of exactness I have performed it, I leave for you to determine. In submitting my ideas to your judgment, I feel that I am subjecting them to the severest ordeal. I am aware of their imperfections, I anticipate criticism. But may I not in consideration of an honest attempt crave to obtain your kind indulgence. If the artless manner in which these pages are drawn up, should allest sufficient skill and

requirements, to admit me to a fellowship, in your honorable profession, I shall feel more than repaid, for the untiring efforts, I have made to obtain it. But if on the other hand from a careful scrutiny of the knowledge, I have received at your hands, you deem me inadequate to the great and important trust to which I am aspiring, then will I exclaim as did a philosopher of old, "Who is he, who when life and health are at stake proclaims, 'let there be light'." Gentlemen, you give me training in the requisites of your profession, far better without your honours, than to cast upon me the dreadful responsibility of tampering with the life of my fellow man. These ideas I trust seem to dictate, the rule of decision which should guide you in your deliberations. Thus only relying upon your justice and integrity and my own claims to the Fellowship, I take the liberty to subscribe myself

Your anticipating Diplomatist

J. Marcellus Mead

An

Inaugural dissertation

on

Tree Cancer

submitted for examination to the

Provost, Regents and Faculty of Physic

of the

University of Maryland

for the degree of

Doctor in Medicine.

By

Erasmus Darwin,
of Maryland

Baltimore, Feb. 14th 1836

v

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AN

INAUGURAL DISSERTATION

ON

CHLOROFORM

Submitted to the Examination

OF THE

PROVOST REGENTS & FACULTY of PHYSIC

OF THE

UNIVERSITY OF MARYLAND.

FOR THE

DEGREE OF DOCTOR OF MEDICINE.

BY

GEORGE W. BOWLEN

of

VIRGINIA.

1856

To

Prof. G W Miltenberger

and

M K Baldwin M D

In consideration of his admiration

Of their high attainments in medical science

Together with

Their elevated character as gentlemen & scholars

This essay

Is respectfully inscribed

by

The author

Gentlemen

In adopting the medical profession as a business pursuit for life, you entertain an adequate conception of the responsibility, the laborious and self denying character of the position you are assuming

While almost every profession enjoys its intervals of relaxation from toil, care and anxiety, that of Medicine is perpetually liable to unremitting toil, the most harrassing anxiety and ceaseless care

While our profession is obvious to the above remarks and numerous others of a kindred character, it is equally just, appreciated, assiduously prosecuted and honorably pursued of returning the richest reward that can be reaped from the fields of science

To the true philanthropist no return for the labor he performs can be as ample as the consciousness that he

is instrumental in the mitigation of human suffering, the arrest of death and the prolongation of human life.
No individual should embark in an enterprise so momentous as this without full and thorough investigating the whole subject and calmly and deliberately determining to see if all the endowments both physical & mental together with whatever energy he is master of to enable him to become a safe guardian of the lives and health of his fellow creatures, for true it is that he is the instrument in the hands of a wise providence, and by the means at his disposal, the acquisition of and adequate knowledge of which are worthy to engage all the powers of his mind to enable him to retard the progress of the fell destroyer, and thus make himself a benefactor to his race. On emerging from collegiate walls after having passed through the

preparatory exercises of a graduate in the science of Medicine, the student has, as it were but just arrived at the point from which he is to launch forth upon the vast drama of observation and experience a proper appreciation of which, added to natural and acquired abilities will entitle him to the honored cognomen of Doctor of Medicine eminent or rich in proportion to the faculties he has enjoyed and the manner in which he has improved them.

To be a good physician requires not only that he shall have had extensive opportunities for witnessing disease but shall have made extensively the recorded observations of others. It demands too the utmost powers, powers of discrimination. Consequently we are led to exclaim in the language of an eminent Physician, hence the varied know-

=ledge a physician ought to possess and the learning and dignity of the science.

The hero on the battlefield urges his way to glory through the gush blood and mangled forms of his fellow men, while his father remains with the dirge of both mingled with the dying groans and horrid imprecations of the vanquished and his reward veiled by the darling title of Fame. Contrasts of orphans tears, widows groans, sisters lamentations and nations calamity.

The frowns and lofty statesman whose great form, eagle eye and towering intellect is calculated "for appeals of listening senates to command" whose lips seem touched with a live coal from the altar of his country's welfare, whose sentiments of patriotic devotion to national prosperity spar his

through burning eloquence which fir kindles with a matchless power kindling the hearts and fanning the minds of his countrymen is an object of pride and admiration and fires his within his own heart a consciousness of superiority and importance above the common herd, but alas! his superior abilities and peculiar advantages too often yields to the temptation to be devoted to the meanest machinations of the unworthy, to the contracted object of personal aggrandisement and selfishness.

But the scientific philosophers who contemplates the ideas of the Deity in the wonderful machinery which the Lord of nature has displayed in the constitution of man whose business it is not to destroy the wonderful work of God thus created, now to pervert the

inestimable mental endowments
were bestowed to bring to the despon-
dement of others, but to minis-
ter ease and comfort to the afflicted
to smooth the thorny pillow of
ail & suffering humanity, requires
a position worthy the emulation
of the purest spirits and most
eminent philanthropists.
Amid all the responsibilities of the
profession which we have chosen
or which circumstances have pre-
scribed to us, it is a noble profes-
sion and worthy the devotion of
a lifetime. If we fit ourselves for
for its high functions and pur-
sue its benefits in earnestness
and truth it will probably conduct
us to an honorable competence
but the mind with useful
and interesting information is an
exhibition of human wisdom far
above that esteemed by the vulgar

ual who accumulates this world's goods with a jealous industry for the mere purpose of gratifying his ambitious desire to excel in the science of wealth, to the total exclusion of the cultivation of his intellect, for the shaft of adversity from whose visitations none are exempt may suddenly deprive him of that filthy lucre upon which he has set his heart and render his condition forlorn indeed. Not so with the man who has dealt honestly and faithfully with his mental faculties by imbuing them with a fund of useful knowledge, which under ordinary circumstances will enable him to meet the demands of nature promptly, while he is enjoying health, useful to others, and it will ultimately prove a salutary school of mirror & moral

discipline. Small and altered belong to the medical profession and difficulties necessarily attend it, but it has also brilliant and immortal mention to insure affording ample delight and exercise for the intellect. It is conversant with objects which tend to elevate the thoughts, to charm the feelings and to touch the heart. Perhaps beneath our mortal dwelling there that most remarkable portion of matter which is called for a season to be the tabernacle of the human spirit, and which apart from that singularly interesting thought excites intensely wonder & admiration. The more closely we study its marvellous construction. The dark varieties of human feeling & motives with which our daily vocation is familiar, shake rebuke our pride while they quicken our charity.

As we are entrusted in a more than ordinary measure opportunities of doing good to our afflicted fellow-creatures, of charity towards our neighbour. Let us beware how we idle, careless or selfish, above a stranger, as precious let so wrights. The profession of medicine having for its end the common good of humanity, disclaims nothing of national sympathies, nor political strife, of sectarian dissensions. Differences from the sick conditions of its ministry, it is administered by no religious concerning the justice & honesty of its transactions, but dispenses its benefactions without stint or scruple to men of every country, and party and rank, and religion, and even of no religion at all, and like the quality of mercy of which it is the favorite handmaid "it blesseth him that gives and him that takes"

leading continually to our own hearts and understandings the most impressive lessons, the most solemn warnings. It is ours to know in our own instances forming indeed a vast majority of the whole, bodily suffering & sickness are the natural fruits of evil causes, of the sins of our fathers, of our own hundreds transgressions, of the malevolent spirit of others. We see too the use of these judgments which are mercifully ordained to recall men from the strong allurements of sin, and the slumber of temporal prosperity, teaching that it is good for us to be chastened & afflicted.

Familiar with death in its manifold shapes witnessing from day to day its sudden stroke, its slow but sure siege, its steady & insidious approaches we are not prepared

ted to be unmindful that our own state also is short and uncertain, our opportunity precarious, and our time even when longest too little if measured by our own moral wants and intellectual cravings. Finally, we remark that surely no one without earnest and careful preparation, will dare engage in a calling so capable of good if rightly used, so full of peril to moral life & health, if administered ignorantly, or unfaithfully. And even when we have made it as we may the means of continued self improvement, and the channel of health & ease around us let us not neither we will thus obtain trace an unbecoming spirit of hesitancy, but remember that in our most successful efforts we are but the humble instruments of a superior power, have that after all

of God who healeth our diseases and redeemeth our lives from destruction. As we are a society of students, let us be as a band of brotherhood should be, consistent in our minds, a prepared and ready for the friend of truth who may choose to visit us. In matters pertaining to profession should we be cautious and we should ever be that respect of counsel and forbearance to each other which characterizes the liberal minded and generous, and endeavour in all our intercourse to hold up each others hands by counsel and advice when willing to bear each others burdens and participate in each others afflictions.

In appointing the discharge of duty here called for we by the laws of the University of Ireland

to whose friendship I feel most
the strongest and most fraternal
obligations, I feel constrained to say
with that the merit which I shall bring to bear on the subject
will hardly enable me to do it
a tolerable degree of justice.
The necessarily limited time
allowed for preparation, the distractions
connected with a hospital, and
the incidental disturbances
the pestilence of disease, together
with the close attention of the
College crowded into a brief space
of time forming the sum total
of his opportunities will explain in
a degree the unsatisfactory manner
in which a subject is treated which
is of a much more extensive and
comprehensive character.
Inasmuch as circumstances have
forbidden themselves in the sense
under they are proceed to the

prosecution of the task, feeling confident that those to whom a perusal it is to be subjected will reward towards it the utmost exercise of charity the nature of the case will admit.

While surveying the broad field of medical science, and contemplating the varied and numerous subjects that present themselves to my consideration, I feel almost at a loss to decide which to select as most best adapted for an having claims to be the subject of my inaugural essay.

The various forms of disease which frequently furnish matter for a dissertation of this kind have long been the subjects so well established by older hands, and their treatment so accurately defined, that it seems almost an act of supererogation on my part to attempt to adduce any

thing of interest in relation to the
Many also of the multitudinous
[illegible] of remedies or [illegible]
[illegible], and to which end the
[illegible] and [illegible] medical
list has been assigned a prominent
position therein, and their respective
and [illegible] been distinctly designated
by the numerous [illegible] that
[illegible] upon them.
It would be no means [illegible]
out the idea that the [illegible]
[illegible] of the diseases or [illegible] that
have been exhausted, and it is certain
that as no human device is perfect,
[illegible] life to aver
a perfection in the science of medicine
or any of its branches or
[illegible]
Among the remedies which seem
to hold the tenure of their life
with some degree of uncertainty
in some respects, which seem to

present a profitable field for discussion and the one which I have chosen as the subject of some thoughts is that of Chloroform

Medical opinions in relation to this agent has been so very odd that it is very discouraging and much divided while many eminent Surgeons, as Coulson & Physicians, as Simpson, Thomas, Tuson & assign it a prominent place in the scale of importance, as an anæsthetic, as stimulant and relaxant, others on the contrary as Smith, Meigs, Wilson & maintain the opposite views with regard to the safety of its employment in many cases. Amid the contradictory opinions of Medical men capable of giving an judgment on the subject it is with no little difficulty that an individual arrives at a correct conclusions. Nevertheless as this must address itself to the judgment

of every one interested in the practice of the profession, and as none can be to escape the responsibility of engaging in the business, I decl[illegible] with [illegible] my opinion to a [illegible] of enthusiasm, (for I am inclined to occupy conservative ground with respect to this as well as all other subjects) that my convictions are decidedly in favor of its employment in properly selected cases, or cases which are of authenticated nature, and where no contraindications exist to its use.

It is true that a number of cases of death have been attributed to the agency of chloroform, but of these I am disposed to think a majority were illselected cases or those in which the article was improperly administered by unskillful hands. Admitting this to be the case, the unhappy results would detract

nothing from the actual value of the remedy, the most valuable medicines are liable to abuse, a medicinal dose of Opium given in a case of coma would probably destroy the patient while a few drops of Concentrated hydrocyanic acid (although a valuable remedy when given in proper form & dose) would likely produce a fatal result. It must be admitted on all hands that too indeterminate a use of this potent agent as an anesthetic has been indulged in by the trivial operation of extracting a tooth to that of amputating at the hip joint. To admit this above fact is to grant that there is danger in its employment and who will deny it, in the present state of knowledge. It is not impossible but that future developments and a more intimate acqu-

-aintance with its effects on the economy will enable us to decide at a glance as it were as to the propriety of its use in a given case but in the meantime I contend we are justifiable in resorting to its use in such cases as adherence however limited has been sufficient as it would be of service. As we have seen there is danger I would not recommend its use when there was manifest contraindication and the powers of life seemed adequate to the task of sustaining the operation, nor in any minor operation such as extracting a tooth or opening an abscess under ordinary circumstances

The question may arise however whether it should be employed in every surgical operation merely with the view of produc-

=cing insensibility to pain consequent. Therefore, much might be said pro & con upon this part of the subject but suffice it to say that when there was no contraindication without a dying or discouraging it's use I would have it to be obtained the patient. In cases where I feared the effect of the nervous shock on the constitution of the patient and when I apprehended much resistance to the performance of the operation, I would be much disposed to indulge the desire of the patient in its administration, Nevertheless I should be timid in attempting to exert any influence to induce him to submit to its use for fear of having to reproach myself for being instrumental in bringing about unpleasant consequences

When the whole I am much disposed to adopt the opinion of Mr Alcock & others, it does not seem advisable that Etherization should be tried in an case in which the amount of spasm or irritability is not likely to cause any obstacle to the operation or danger to the patient. I may be permitted to add in this connexion, that no humane and intelligent being can witness as I have done the delightful effects of this precious agent in severe and painful surgical operations without admiring the wonderful display of divine benevolence, extended towards man, in furnishing him such a boon, in times of his worst affliction, nor can he appreciate and crave to value so rich a bles-

line or relax his efforts in attempting to arrive by rational deductions and in an absolute knowledge in relation to it.

Having said thus much concerning the anæsthetic use of Chloroform, I propose to give a well authenticated account of its history, mode of preparation &c.

Chloroform, Terchloride of Formyle, Formyle being a bicarburet of hydrogen improperly called chlorine Ether, and Terchloride of carbon, was discovered by Mr Samuel Guthrie of Sackett Harbor N.Y. in 1831, and a little the same time by Soubeiran in France, and Liebig in Germany. It is obtained in the following manner according to the process of the Form: "Into a clean copper still put three pounds of chloride of lime and two

gallons of well flavored alcohol
sp. gr. 0.844 and distil, filter the
product, and when the product
ceases to come over highly acid
and aromatic, remove, and cor-
rect it very closely in glass ves-
sels. The residue of the
spirit should be distilled off for
a new operation. The last portions
are not essential, by some
additional lime be made the
ethereal product will be increased,
nor is it necessary that
the proof of the spirit should
be very high. Mr Guthrie says
he has commonly used the
proportions and has never seen
to be satisfied with them
From the above account he has
commonly obtained with a gal-
lon of ethereal spirit
2 oz
For a more minute account of its
properties see Philosophical Magazine 1823

Chloroform is composed of three equivalents of chlorine and one of formyle and is therefore the trichloride of formyle, the formula (formyle being the bicarbure of Hydrogen) is $C_2 H Cl_3$

Its composition was first correctly ascertained by Dumas in 1835, by whom it was called chloroform, from its relation to formic acid $C_2 H O_3$, being formic acid with its three equivalents of oxygen displaced by three of chlorine.

When first obtained by him he supposed it to consist of chlorine and carbon, and hence the origin of the erroneous name of trichloride of carbon, by which it was sometimes called.

The usual impurities in chloroform are alcohol and ether both of which are by lowering its specific gravity.

To determine the presence of impurities which have this effect on its density, Soubeiran recommends that a drop of the suspected chloroform be added to a mixture of equal parts of concentrated sulphuric acid & water. Such an acid when cold will have the specific gravity of 1.38, and good chloroform being of greater density will sink in it. M. Mialhe has proposed the following test for the presence of alcohol, viz. into distilled water a small quantity of chloroform, if it be pure it remains transparent at the bottom of the glass, but if it contains even a small portion of alcohol the globules acquire a milky appearance.

The advantages which Prof. Simpson of Edinburg concedes chloroform to possess over sulphuric

as the smallness of its dose, its more prompt action, its more agreeable effects, its less tenacious odour, its greater cheapness and the readiness with which it may be exhibited.

The best method as yet devised for its inhalation, in my opinion, is the simple expedient of pouring one or two drams (which is the ordinary dose as an anæsthetic) on a handkerchief rolled up in the form of a birdsnest, and held a little distance from the patient's nostrils, in order to enable him to inhale at the same time a sufficient quantity of air to carry on the function of respiration. Various forms of apparatus have been invented for this purpose, some complicated and cumbrous. It seems superfluous however to enter into a description of them

as I conceive the above method to be far superior, partly on account of its simplicity and the readiness of its application

The Medulla Oblongata, where proceeds the sympathetic nerves which supply the system of organic life is the seat of the Cerebro-spinal system to be overcome by this agent hence it is explained how the functions indispensable to life are carried on while general insensibility prevails

The length of time required to produce anæsthesia is very various in different subjects, owing to various circumstances, some of which are accustomed stimulation, difference of temperament, general susceptibility, irritability etc. Under ordinary circumstances of general health hygiene from 30 to 60 or 120 seconds may be stated as the average

period, and continue under its influence from 5 to 8 minutes
The anesthetic effect is strongly resisted by topers and such as are habituated to inordinate stimulation especially while under such influence and has to be pushed in these cases if employed at all
It is advisable to commence the operation as soon as insensibility is induced, as indicated by inability to answer questions, immobility of the muscles on being smartly pinched etc.
In case the operation should require more time than is required by the influence of the first inhalation, it may be cautious to readministered and persisted in until the operation is concluded
The usual effects induced by a full inhalation is the rapid, produ

-ction of coma, relaxation of m-
-uscles, slow and stertorous breath-
-ing, upturning of the eyes and to-
-tal insensibility to external insti-
-ncts. The effect on the heart se-
-dom is considerable. Sometimes foaming
at the mouth takes place, and in
one case the convulsive twitchings of the
face and limbs, and still more
rarely, hysterical paroxysms with
low muttering and delirium ensu-
-ed and boisterous talking, sometimes
the immediate effects are followed
by a state of drowsiness & stupor
and sometimes by a quiet sleep
and as a general rule nothing
is remembered of what took pla-
-ce during the state of insensibi-
-lity to the senses of a fortunate
patient bring transformed by this inc-
-ant into a blessed dream-
-world from which he awakes
refreshed and [illegible] as

one in relation to surgery, are
not to say, entertains a view
upon this point considerable
variance with the, rather dra-
stic. He contends that although
the patient remains in a state of
consciousness during the operation, he
retains no recollection of its occur-
rence. He nevertheless in some
cases experiences the pain, to
explain this phenomena he puts
forth a physiological investiga-
tion which I do not feel at liber-
ty or prepared to undertake in this
place.

The following are among the mo
st prominent contraindications to
its use. Any organic disease of the
brain, lungs, or heart. The cattarrhs
generally. The fatty degeneration
of which is indicated by the arcus
senilis of the eyes, the same manifests
as hysteria, a strong tendency to ap

[illegible]. It should not be trusted on persons under the strong influence of ardent spirits, or young children or very old persons, & be careful in depressing the vital energies below the point of reaction and yet also it might be important for us to remember the danger of using it in operations lest the more abundant blood might flow into the trachea and produce asphyxia, or in cases in which we might need aid from the patient himself in the prosecution of the operation

Great diversity of opinion exists in relation to the safety of these agents and as this part of the subject has been alluded to but too rapidly without occupying space for detail, I simply observe that my opinion accords with that of Prof. Mettenheimer of the

Amount of Pain caused when considers it, Cesteris paribus is safe & are taken, must be sought in the Materia Medica, it remarks that the mentality has received just praise in its introduction & employment, notwithstanding the limited knowledge of its effects arising its comparative Early, and very Imperfect Conclude that it is worthy the serious attention & not the mere Empirical employment of the profession

Chloroform has been frequently employed under my observation in various kinds of severe surgical operations at La Clinique in the Baltimore Infirmary by Prof. R. E. Smith, and always with the most perfect success so far as the immediate effects of the operation was concerned

In one case however the use of

The chief fear regarding the
relapse which occurred was mainly
attributable to its agency or
of its tendency to relax the coats
of the capillary vessels the cir-
culation being feeble there is
or immediately after the operation
on account of loss of blood
or shock and when reaction co-
mes on after the wound is clo-
sed hemorrhage occurs from the
cause alluded to above
The operation in question was
performed on account of a can-
cerous tumor which occupied
the region of the knee joint
in an elderly man the question
naturally suggests itself in this
case how much of the secondary
hemorrhage could be attributed
to the debility which necessarily
by the cancerous cachexia which
invaded the system

Dr Smith employs the agent with considerable success and although he states that he has used it in hundreds of instances without any disastrous results he entertains the belief that secondary hemorrhage occurs frequently as a result of its employment and inclines to the opinion that at some future day it will fall into comparative disuse in the domain of surgery.

The most alarming sign of approaching danger from the influence of Oil of Turpentine be in relation is a considerable shrinking of the pulse which should be carefully watched, the operator or some competent assistant, keeping his hand upon it during the whole process, a material failure of respiration and dilatation of the

pupils after having been somewhat contracted are among the signs of danger
When the effects of chloroform inhaled are called to take, or unpleasant symptoms arise from any cause, the prescribed are the horizontal position, cold air fanned on the face, cold douche to the head & face, friction & heat to the body & extremities and ammonia, if these measures fail artificial respiration should be resorted to
In regard to the employment of chloroform in the practice of Midwifery medical sentiment is more divided than as it respects surgery
While some eminent accoucheurs & others simply are enthusiastic in their descriptions of pain

not only as to its utility in dis-
-tocia, but to mitigate the pains
of natural labor. Others as Dr.
Pugh of Philadelphia manifest
a degree of repugnance to its use
in this department of the profes-
-sion, especially when the labor
is uncomplicated. Prof. Pennock
of the university of Maryland considers it a valuable
auxiliary in the operation of lac-
-tation, (the waters having been
discharged) by its relaxant influ-
-ence on the uterus, also to over-
come the inordinate contractio-
-ns thereof, occasioned by the
effect of ergot, urging the head
upon the perineum, & endangering
its laceration, the reduction of
malaise & excitement in all cases
are having been premised
it might be advisable to resort
to its use for the purpose of

calming the uterus by means of hastening the pains for the cervical dilation, when no more time could be indulged of delivering her. Pain was natural, with the additional indication of obtunding the nervous sensibility.

I cannot perceive the propriety of employing this agent in a process so natural as that of parturition, unless the medical attendant should be convinced that the pain was greater than could be safely borne, especially at the moment the head escapes the vulva, and even then given to full anæsthesia which would be required to kill pain the contractions of the uterus would be interfered with according to the most rational view, and the only, we view it an unjustifiable

procedure. Those who simply endeavour to mitigate the pain of protracted labour, entertain the notion that it is not to interfere with the natural contractions, while on the contrary it is used in the operation of turning, it with the direct view of producing the labour. It is difficult to reconcile this demand contradictory, unless the immediate or the use in the dominant should explain the theoretical of its action, but it is to the point that muscular contraction including the uterus is necessary, with the exception of sufficient of nervous sensibility, the uterus is one motor nerve of spinal cord forming from the lumbar to the dorsal vertebrae, this spine.

Upon the whole the most plausible reflections would seem to lead that it should be used in no case of natural labour, but there is [illegible]

when it often becomes a useful auxiliary
to our remediable measures
Another of the most important effects of Etherism occurs in the domain of Surgery as a relaxant especially in dislocations, that extremely painful and often difficult operation of reducing [illegible] like a dislocation of the head of the Femur which has frequently baffled [illegible] [illegible], [illegible], [illegible] these [illegible], may now be accomplished [illegible] the use of this agent (longer exhibited) and a little [illegible] manipulation with the utmost facility. Also in strangulated hernia after [illegible] it has [illegible] an object [illegible]. The [illegible] [illegible] [illegible] the [illegible] of the [illegible], it may be exhibited also for the purpose of aiding us in distinguishing between dislocations & fractures when the [illegible] of the patient are [illegible] [illegible] [illegible]

The necessary medication be the
[illegible] or respiration effect is to
in the nature of the [illegible]
in addition with proper precautions
it may be tried
It will be noticed in the fourth
in anticipating the prognosis of
[illegible] of great [illegible], Arthur, Hippo-
[illegible] and Titan are in a case
of tetanus from gunshot wounds in
the Baltimore infirmary, so less the
four hours of chloroform in a
[illegible] which [illegible] in a
[illegible] ill effects but [illegible]
[illegible] the malady any further than
by suspending pain in a great measure
for the time being
It is worthy of note that it has
more or less debility & depression of
spirits behind. It either is not
stimulating, when that effect is
desired it may be proper [illegible]
[illegible] to use [illegible] for [illegible]

It would seem presumptuous for me to enter into a critical examination of the applicability of homœopathy in medical practice. It is a science and a study, the institutes of which are an object of no mean importance. It has called into requisition the admirable talents of many in doses of 10 to 60 gtts as an antidote to the poison of strychnia etc, may be applied externally, combined with a mixture of camphor & opium, for the relief of other maladies.

When all has been done, the patient that not can draw on affection & solicitude during, without a sigh or tear, a cancerous tissue as in cancer & hopeless cases — as epilepsy, tetanus etc. and death, continued for a considerable

period. The author [illegible] a
[illegible] the whole the most
[illegible] terrors, and the natural
[illegible] of a humane
and [illegible], is eloquently appreciative
in this [illegible] of the
[illegible] terror transition, and
[illegible] [illegible] why we
should entertain such relief, nay
[illegible] cannot see how a practitioner
could mock the act of omission of
duty on his part, whose business
it is to relieve pain as well as
[illegible] diseases, and [illegible]
this result can [illegible] be accomplished
[illegible] in the production of
anæsthesia by the use of chloroform
[illegible] to [illegible] operations
but when there was no possibility
of sustaining the patient's
existence but rather a prospect
of prolonging it by suspending
the agonizing sensations which

an conspiring to hasten his dis-
solution
While I was [illegible]
resolved to [illegible] experiment to terminate the [illegible] go [illegible]
[illegible] the [illegible] for a moment [illegible] his sufferings, I was far
much inclined to comply with me
and in my heart to [illegible]
thoroughly [illegible] the [illegible] of the
[illegible]

An

Inaugural Dissertation

On

Pregnancy

Submitted to the examination

of the

Provost, Regents & Faculty of Physic

of the

University of Maryland

For the degree of

Doctor of Medicine

By

Solomon Betts Jr.

of

Maryland.

Baltimore February 1856.

With the deep conviction of my incompetency, at this early period of my medical life, to add any important knowledge to our art; I hope you will accept this my inaugural dissertation as the fruit of careful attention to your valuable teachings - while sitting in the Halls of the University of Maryland; and as the experience of those gentlemen whose books I have had the privilege to study; - in short, such information as I have derived from the experience of others. —

Though I have received some knowledge from you all - either directly or indirectly, upon the subject which I have chosen; yet it is principally to my able teacher - Prof Thomas, - that I owe a debt of gratitude for such knowledge as shall be revealed in the following pages upon the subject of pregnancy; and to that worthy gentleman I can at present, alone subscribe my humble thanks; hoping however that at a more advanced period of my medical career, I may be able to offer something of greater utility in a scientific point of view.

Pregnancy may be defined as the developing of an embryo or foetus in the womb; and a female may be said to be pregnant from the earliest moment of conception to the end of the puerperal state.

The changes and phenomena which occur in the organs of reproduction, and in the whole female economy during this period are replete with interest, and are calculated to fill with wonder and admiration, the mind of the enlightened and scientific; while they have been known to strike with superstitious dread and perturbation the mind of the ignorant and incredulous!

Man is endued with sensations and susceptibilities which affiliate him to all the purity and perfectness which this world of beauty can afford; he is endowed with a mind, enriched by education, which has enabled him to comprehend the laws by which the winds blow, and the tides of the ocean like a vast clepsydra, measure with inimitable exactness the hours of ever-flowing time; the laws by which the planets roll, and the

his vivifies and paints; the laws which preside over the amazing velocities of electricity; the laws of gravitation, repulsion, calorie, magnetism, fire, air, light, lightning — can be comprehended by him more easily, — than the laws which govern the female economy. There is a secret mystery in this economy which perhaps must ever remain ambiguous and inexplicable; for who can comprehend those proximate causes by the force of which a non-existent, or formless being is drawn forth of the dark sources of time, and launched out on the boundless ocean of eternity; brought from nonentity, and made to act his part, as a player, in the drama of life? —

Many have been the hypotheses propagated for the explanation of some of the mysteries of generation; — some of which have pointed as feebly to the goal of our science, as the will o'the wisp's light, to the path of the bewildered traveler! Indeed, retarded our science; for all such idle

speculations only tend to bewilder the mind of the student. But we have theories, and explanations of truths, which are of infinite value to us; such as enable us to comprehend many laws of generation and reproduction, both in the animal and vegetable world; — rendering the subject of Pregnancy replete with interest and importance.

Since it was the will of God that we should "be fruitful and multiply" there has been enthroned within us a love peculiar; the seat of which however I will not attempt to explain, as there is a discrepancy of opinion between the male and female sexes, as to its locality; the former sex considering it the testes and ovaries; the latter confining it to the heart. However be the locality where it may, the testes secrete seminal fluid or prolific liquor, and at the age of puberty the symptoms of virility instigates us to the fulfilment of the commandment or the propagation of our species, and for this

purpose, the seminal fluid must be emitted sub coitu into the female vagina, and there by contact penetrate and impregnate the ovulum in the ovarium. Copulation therefore becomes essential to fecundation and conception. But these two words, — Fecundation and Conception can not be used synonymously for an ovule may be fecundated without the woman conceiving.

First then I must notice Fecundation. This follows the embrace. The matured ovule or germ is expelled from its Graffian follicle and on its encounter with the male sexual element or sperm; fecundation ensues. No woman ever conceives without the union of these two substances, — the male and female sexual element, — for the discharge of either separately is incapable of producing a living being. I say a living being, — the ovulum though literally alive, is not generically alive; it is incapable of generical evolution without

a mixture with the male element.
I am unprepared to say which it is that furnishes the nucleole of the new entity for development — the male or female element.
But this is one of the mysteries of the subject; and since far abler minds than my own have failed to invent any mode of finding out, I will not at present attempt the discovery. I hope you will consider my ignorance of the essential nature of fecundation pardonable.
I remarked that the words fecundation and conception could not be used synonymously — and the reason is clear; for the fecundated ovulum may after its entrance into the uterus, fall immediately into the vagina and be carried away amidst a flow of blood or mucous before its attachment or union with the living surface of the mother. Therefore the words express quite a different meaning — fecundation being the mixture of the sexual elements, and Conception their fixation to a living

part of the mother. This attachment should be to the inner surface of the womb which would be a natural or interstitial pregnancy; but unfortunately for both mother and child this is not always the case, for occasionally we have extra-uterine pregnancies or conception out of the womb; and this has been known to occur in the Fallopian tube forming what has been called a tubal pregnancy; and in the pelvis or belly-forming an abdominal or ventral pregnancy; and in the ovary itself forming an ovarie pregnancy.

This leads me to the consideration of the encounter of the sexual element, but certainly not to explain the precise place of their incorporation or union, for to be bold I do not believe that there is any especial point, - because if there ever was an ovarian pregnancy the encounter must have been upon the ovarian indusium; if within the Fallopian tube they must have united within or beyond that uterine appendage, - for if the union occurred in the

Fallopian tube the mixed elements could not have returned to the ovary there to become fixed; and if the fecundation occurred in the womb they could not have returned to the Fallopian tube. This is my opinion and I give it because I am unconscious of any purpose it subserves in returning to the ovary or Fallopian tube, after fecundation in the womb; for after fecundation the product I believe has received from the ovary all the fertilizing properties that organ can supply, and the ovum is prepared for development, as soon as it shall become fixed to the womb.

I am aware of the fact that the Fallopian tubes are the vectors of the ova; and that they may also convey the male sperm to the ovary, and after encountering the germ return the whole to the womb, - but I cannot believe that it is the design of Providence that the product of fecundation after its arrival in the womb, should again be returned, to become fixed to the tube, abdomen, or ovary. And since these

extra-uterine pregnancies unquestionably occur; and that it is unreasonable that after fecundation in the Fallopian tube, or womb, the product should be conveyed to the ovary, - and since ovarian pregnancies have been seen - is it not the most rational conclusion that we can come to, - that the encounter takes place on or near the ovary, and that the fecundated ovule might be prevented from escaping from the ovary, by some peculiarity or change of this organ, or that it might be detained by a mechanical obstruction to the pore, by a fold of peritoneum or intestine? This would account for ovarian pregnancies. But suppose the ovum was not detained by intestine or any other cause, but after fecundation, was on its way to the womb, could not a sluggish action of the fimbria, or some change or pathological condition of the pouch, suffer the whole to fall into the peritoneal sac, and there form a ventral pregnancy?

But if this accident should not occur; may it not be checked in its progress through the

Fallopian tube by some impediment there, forming a tubal pregnancy? This appears to me to be the most rational cause of these pregnancies. But since some of the workings of the ovaries, — the pride of woman and the shrine of man — are inexplicable, and are probably purposely set beyond the reach of the utmost ken of human knowledge, I had better avoid farther speculations upon the precise place of fecundation, and say that after the spontaneous discharge of the ovulum and the dehiscence of the male sperm, — the two elements may possibly meet, while on the wing, — irrespective of place.

Probably several days elapse between the act of fecundation and that of conception. After fecundation the united elements undergo important changes — such indeed as prepare it for development, — and for this purpose it must become attached to the living surface of the mother; and the uterus being the proper place for such attachment, the ovum with its mixt constituent elements is brought

from the ovary - (for I write upon the supposition that the encounter takes place on or near the ovary) - through the Fallopian tube, and deposites in the womb.

As soon as nature has accomplished this fixation to the womb, the woman has conceived, and from this moment pregnancy begins. This ordinarily occurs shortly after the disappearance of the periodical effusion or the menses.

If the question was now asked me:- what time should elapse between the process of ovulation and fecundation, and that of conception? My answer would be I know not; and I almost fear to guess; because of the great uncertainty which rest, upon the subject, and the great ambiguity of the explanations, or hypotheses, which I have read. Now as there has been a discrepancy between authors in computing the term of pregnancy - some counting two days and others two weeks, after the disappearance of the menses - allowing respectively 273 and 280 days as the

proper duration - it shows at once the liability to fallacy - in answering this difficult question. When the exact duration of pregnancy is understood, that is when it is found that there are a certain number of days of utero-gestation, - by careful observation it may then be ascertained precisely, when conception takes place; - but until then, I believe, interminable darkness must hide us from such knowledge! Conception must shortly follow fecundation when the coitus is successful - and I should not think that more than three or four days could elapse before the mixt elements would become attached for development - wether in the uterus or Fallopian tube.

Several days, I suppose, may elapse before the ovum by endosmose - shall have augmented in volume and undergone such changes as make it necessary that with its mixt constituent elements it should become attached to the surface of the mother.

When then is coitus most successful? I believe the sooner it follows menstruation,

-and the reason I must give is that the fecundated ovulum becomes attached (and the woman therefore becomes pregnant), before it can be washed away by the men-strual effusion. The egg retains its susceptibility to the male excitant probably for twelve days after the ovulation; but it strikes me that the fimbria of the Fallopian tube would be much more likely to secure the Graafian follicle, just either immediately after menstruation, than twelve days after. Then, in short, I believe that conception succeeds fecunda-tion within three or four days: Secondly that fecundation and the aphrodisiac orgasm are nearly simultaneous, providing-thirdly,- that the menstrua are quiescent and there is prepared an ovule for the encounter with the male element. Probably the fimbria of Fallopius, while under the aphrodisiac orgasm grasps the ovary and secures it until the male sperm by the vulnerative discharge is sent to the Fallopian

tube to be carried to the ovary and then by contact to penetrate and impregnate the ovum in the ovarium; and after it has undergone the necessary changes to fit it for a higher office – its attachment and development – I must next notice what it meets with in its passage to the uterus.

The Decidua. – Is a substance or membrane excreted by the uterus coincidently with the fecundative ova; and subserves the purpose of securing the product of conception: and affording it a midus from which it imbibes the earliest elements of its development. After fecundation has taken place, changes occur both in the ovum and uterus; in fact all the internal organs of generation become the seat of vascular turgescence. The uterus then throws out this decidua vera or soft indurium to line it internally; covering the cervix and Fallopian tubes and receiving the product of conception as it descends through the Fallopian tube, and pushing it forwards, causing the decidua vera to be reflected

over it until a decidua reflexa is formed, which at last comes in contact with the inside of the decidua vera, and by firm pressure against each other, they become welded together; so firmly indeed as to be inseperably connected, and indistinguishable the one, from the other. They are in my opinion, the same.

I believe it is a physiological fact that mucous membranes will not unite; and if this the decidua is the true mucous membrane of the uterus, would it when reflected within itself, become so beautifully incorporated? I think not, though some physiologists have supposed the decidua to be the mucous membrane of the uterus modified. But I think that it is a substance peculiar to pregnancy, — a provision for the product of conception; containing elements of nutrition for the embryo, and destined to perform offices which cannot be performed by a mucous membrane. After miscarriage it sometimes happens that the whole decidua with the entire product of the gestation is found to have been thrust forth unbroken. Is it possible

that this can be the mucous membrane of the uterus? To this conclusion I must come if I had the understanding of a Sharpey or a Weber; but this will remain beyond my comprehension until it is made satisfactory or proved that the decidua never has been aborted entire, or that it is a possible case for the mucous membrane to be aborted and again by some physiological process secreted or renewed, — for I believe that the womb must have a mucous lining. However I must give this subject much more study, after ocular observations, before I can decide positively as to the correctness of any one of the different hypotheses.

When the Graafian vesicle bursts, a yelk — similar to that of a hen's egg, only much smaller — being about one fifteenth of a line in diameter, containing within its vitellary corpuscles a germinal or Purkinjian vesicle — one sixtieth of a Paris line in diameter — one whose wall, is the germinal spot or nucleus from which after impregnation with the male

sperm all the parts of the new being are developed. After this impregnation which takes place as I have before said "over near the ovary" by its own plastic power it is developed from materials or pabulum supplied to it by the mother. As it passes along the Fallopian tube it augments in bulk by imbibing the fluids in which it is bathed, until it is discharged by the vector tube into the decidua or caduca. At first it is unattached but in process of time it becomes fixed to the inner surface of the womb by its own tufted corion, and at this time bears a relation to the mother analogous to that which the bud bears the tree, upon which it is engrafted;—the tufts of the corion being inserted into the deciduous mass of the womb, by its villous processes, serving as absorbing radicles of the fluids of the mother, until a placental communication is established. But I must notice the coverings which this ovum receives before any attachment, or before the woman is

actually pregnant. Immediately after fecundation, this yelk of which I have spo=ken is cleft into several segments, and I believe physiologists resolve the division first into two, then into four, and then into eight segments, each of which contain a transpa=rent vesicle, probably a descendent of the original cell given. By this continued multiplication the entire cavity of the yelk membrane becomes filled with what has been called the germinal or mulberry mass. Each component segment of the yelk is converted into a vesicle by an envelope and the contained particle of this vesicle is the nucleus. This happens first to the peripb=eral portions of the mass, which arrange themselves, at the surface of the yelk into a membrane which becomes thicker by the mul=tiplication of new cells from the interior, and forms what is called the "germinal mem=brane". From this germinal membrane the whole structure of the future embryo is said to originate, and it surrounds completely

the liquid yolk; from the fact of it being the origin of the embryo I suppose it has been called the "blastodermic vesicle."

An accumulation of cells takes place upon one portion of this blastodermic vesicle, constituting what is called the "area germinativa" in which all the structures of the permanent organism originate, whilst the germinal-membrane itself subdivides into two layers, — a mucous or inner layer, and an outer or serous; between which is subsequently developed the vascular system. The outer layer afterwards becomes the integument; the middle the vascular system; and the internal or mucous layer, that of the digestive apparatus.

Now as the development of the ovum progresses, the outer or serous layer of this germinal membrane rises up, one on each side forming a double membrane which gradually approach each other in the form of a double fold on each side, until actual contact ensues. This membrane is called

the amnion: but it still has to undergo another change, for as each fold contains a double membrane and the whole being between the general envelope—the chorion,—and the embryo; the outer layer of this double amnion adheres to the inner layer or surface of the chorion; while the inner one alone is the true amnion, and destined to perform the offices of that membrane, in the future development of the embryo and fœtus. It is a distinct sac or proper amnion.

This amnion is continuous with the common integument of the fœtus at the open part of the abdomen, and in the early stages of embryonic life embraces the embryo with a good deal of tenacity; but as gestation advances this transparent and serous-like membrane secretes a bland fluid resembling dilute serum, called liquor amnii.

This liquor amnii subserves several important ends; the most certain of which, if not

the most important, is that it protects the fœtus from external violence, — such as tight lacing, sudden blows, falls &c. It also aids in preserving an equable temperature for the fœtus, and in dilating the os uteri, in the first stage of labor, by pressing the membranes down: but probably the most important end which this fluid subserves, is the supplying of the fœtus during the early months of gestation, with nutriment.

This leads me to the consideration of other means of fœtal nutrition: and I must notice systematically, though briefly, — the umbilical vesicle, the allantois, and the placenta with the fœtal circulation.

Umbilical Vesicle. — After the blastodermic or germinal membrane has undergone such morphological changes as have converted it into a rudimental embryon, part of the yelk corpuscles still remain unappropriated; and as these are contained in their original vitelline membrane, they constitute what is called the umbilical —

vesicle. This is formed by a doubling in of this germinal membrane under the abdomen of the embryo, so as to inclose a cavity containing the yolk or vitellary ball which communicates by a delicate tube or duct with the intestinum ileum of the embryo.

By the fourth month the amnion has grown so considerably, as to fill up completely the cavity of the chorion; and therefore the umbilical vesicle is entirely detached from the foetus, and consequently the foetus can no longer derive any nourishment from this source. No doubt the pabulum of nutrition in this umbilical vesicle has by this time been exhausted. Traces of this vesicle can sometimes be found upon the umbilical cord up to a late period of pregnancy.

The Allantois supersedes the use of the umbilical vesicle, for it is by this mean that the foetus now derives its support. This allantois springs from the caudal extremity of the foetus, where the urinary bladder

is subsequently dated; and is formed from the mucous layer and has distributed upon its surface, blood vessels from the vascular layer. It extends itself between the amnion and chorion, but passes through the chorion until it comes to the placental tufts or where the villi of the chorion are most abundant and then becomes attached by the vessels which it carries, forming the umbilical arteries.

This allantois in its formation passes out of the open part of the abdominal cavity in the region of the umbilicus and in the process of the foetal development, this cavity is closed, and the allantois separated into two portions which communicate. The part retained in the now closed abdomen is the bladder of urine; the long cylindrical part is the urachus; and the expanded portion is the allantois.

The allantois is then, literally the vesicle for the conveyance of the umbilical arteries to the uterus; that they may there become

attached,

I have several times spoken of the chorion, and I must explain the meaning of that word, or rather, show that I have some knowledge of its meaning.

During the passage of the ovum through the Fallopian tube, it receives an additional layer of albuminous matter, which is surrounded by a fibrous membrane forming its outer layer. This chorion subserves the purpose of forming a communication between the embryo and mother, and thereby enabling the embryo and fœtus to receive the necessary elements of nutrition. A number of villous processes, at first, proceed from its entire surface, forming what has been called the shaggy coat of the chorion; and these villi act as absorbing radicles, drawing in the fluids supplied by the mother previous to a more perfect communication by the placenta.

Except when the placenta is formed, these villi disappear entirely in the progress of the development. In placental animals, as well as human, exclusively, this connection

between the vessels and matter, by the villous chorion. The embryo being surrounded by the amniotic waters and having received such nourishment as could sustain life until a more permanent communication should be estab=lished between the mother and child; I must next notice the placenta.

The Placenta subserves the important office of furnishing the foetus with nourishment and is the only means of its oxygenation, which latter function is as essential to the growth of the foetus as the alible material itself.

I have before spoken of the chorion or outer membrane of the ovum with its villous surface; and I now propose to explain the formation of this placenta, by the penetration of these villi into the tubelli or uterus of the decidua.

It now supplies nutriment to the embryo, by absorbing the alible fluids of the mother but this will not answer the necessity of the foetus through the term of utero gestation, and this deficiency is supplied by the agency of the allantois, as before mentioned, by estab=

=lishing =

a vascular connexion, But the mode of this connexion or communication between the ~~vessels~~ of the fœtus and mother, has given rise to many disputes, and discrepant opinions in the medical world. The celebrated Mr Hunter viewed the placenta as a sym=metrical organ, consisting essentially, both of a fœtal and maternal part; while Velpeau absolutely rejecting the Hunterian doctrine, looks upon the placenta as an organ exclusively the child's. But every man who gives the subject any consideration, has an opinion of his own, which however is but one of circumstances wether inculcated by precept or observation; and I almost fear to give my opinion on the subject, as I certainly shall not waste time in expatiating upon a subject so obscure, and one of which I am so ignorant as to the true condition of things.

When the allantoidal or umbilical vessels pierce the chorion, I cannot think that they are plunged into the fleshy substance of the uterus as roots into a soil, or that

there is no actual means of communication or inosculation with the uterine vessels:- but, that the tufts, or termini of the umbilical vessels of the foetus, come in close relation with the tortuous veins of the uterus, where they are literally bathed in the maternal blood, and give off carbon from the foetal blood, and receive oxygen from the maternal blood; either after the manner of lungs or branchiae; while at the same time by cell endosmose or real absorption, it drinks in the nutritive material of the mother, and thereby effectuates the two prime objects of this branchio-absorptive apparatus.
That this communication should be complete in order to perform the offices as above, it is understood that there should be an apparatus for projecting the blood from the foetus floating in the liquor amnii, to the parent; and for this purpose, the umbilical vessels run along the cord, and subdivide at the extremities into almost numberless capillaries, constituting numerous tufts, which are connected

together by a loose cellular tissue, and these tufts collected into one mass, is denominated the placenta; and wherever these tufts are attached they are called placentas. In the ruminants these tufts are said to be separated, and form therefore a number of placentas. But I am writing of the human placenta, and I must not waste time in treating of the placentas of other animals, with my present stock of placental knowledge, and before I close what I have to say of this organ, I must remark that I cannot imagine how a placenta could ever be removed without some hemorrhage, if blood is conveyed into its cavity by "the curling arteries" up to the close of uterogestation. I think the decidua serotina separates completely the two circulations. The fœtal surface of the placenta is smooth and shiny; the uterine surface is not so smooth, though it is level. The whole organ is about twenty or twenty four inches in circumference, about one inch and a half thick and seven or eight in diameter.

The umbilical cord called also the navel string, forms the means of communication between the fœtus and placenta. This cord which is usually about eighteen inches long, is composed of what is called the Whartonian jelly, two umbilical arteries, and one umbilical vein, duct of the umbilical vesicle, the omphalo-mesenteric vesicle, the urachus, and occasionally a fold of the intestinal canal, while the whole of this is invested by a reflection from the amnion.

A few more words upon the embryonal development and I will next in order, notice the fœtal circulation.

The first distinguishable formation of the embryo is the vertebral column. That part of the blastodermic vesicle in which those cells accumulate called the "area germinativa" is where the "chorda dorsalis" is first observed, and found to be composed of nucleated cells; and exterior to these cells are others, from which is developed this vertebral column. I also mentioned the germinal membrane which

subdivides into an inner or mucous, and an outer or serous layer, and between which is subsequently developed the vascular layer. Now this vascular or middle layer, is concurrently with the development of the vertebral column, formed into the vascular system, which by its vessels, serves to take the nutriment of the yolk and supply it to the assistance of the embryo. These vessels are first to be discovered in that portion of the vascular lamina of the germinal membrane, which immediately surrounds the embryo, and they form a delicate network of vessels, called the vascular area; this gradually extends itself until the vessels extend over the whole of the germinal membrane, and it is through the agency of these vessels that the nutritious matter of the yolk is conveyed to the embryo and forth. The vessels of this yolk bag terminate in two large trunks, called omphalo-mesenteric or vitelline vessels, which enter the embryo at the point afterwards known as the umbilicus. Now the

first fluid which moves toward the embryo may be discovered before the heart is seen.

The heart is formed in the substance of the vascular layer by a dilatation of the trunk into which the blood vessels unite. This organ is at first a mere excavation, but in the progress of the foetal development it becomes larger and is divided into two cavities.

The internal or mucous layer of which I have spoken - in the subdivision of the germinal membrane - forms the permanent digestive apparatus, and originates in the separation of a small portion of the yelk bag, lying immediately beneath the embryo, by a doubling in of the mucous layer, so as to close a cavity. A stomach and intestinal tube is next formed by a prolongation and involution of its walls. The digestive cavity for some time communicates with the yelk bag (from which it has been pinched off), by the opening that is left by the imperfect meeting of the folds

of the germinal membrane that forms its walls. After this orifice is completely closed in mammalia, the yelk bag thus seperated is subsequently thrown off and is known as the umbilical vesicle.

The trunk is the first part developed and the head is distinctly seperated from the other part at this early period of gestation - the embryo being at this time slightly curved; but as pregnancy advances the head grows more rapidly than the other parts, and by the beginning of the second month it is said to weigh half as much as the whole body. The head is usually at the os-uteri and some have supposed that at this era of the foetal development, the little animal with so large a head, must turn in the womb, like a loaded dice? But this is beyond my comprehension of the subject; - and neither can I understand how it should develop itself to suit the shape of the uterus. In short, the only way in which I can account for the head

being most frequently at the os uteri is by concluding, that, when the two elements are first incorporated, one part is destined for the development of the head, another for the breech &c, and that they thus enter the womb and are developed: and that it is a wise provision of God — for the part destined for the development of the head, to be downwards.

The extremities by the fifth or sixth month make their appearance, or rather are quite distinct, and the sex of the child is obvious. The ears, nose, mouth &c — make their appearance simultaneously. The bones of the head are not all ossified completely at birth. But I will give the appearance of the embryo and foetus at different periods of development — as near as I can from some statistics, which I have, and which were taken while listening to a lecture by Prof Thomas.

About the third week the caudal extremity is small, and the abdomen open; fifth week the embryo is 2/3 inch long and the heart and

lungs visible; sixth and seventh weeks the two large bodies, called Wolfian bodies - are seen; by the second month - the arms &c. begin to make their appearance, and the embryo is now about 1½ to 2 inches long, eyes prominent, nose slightly elevated &c. By the tenth week it weighs from one ounce to one and a half; fingers, toes &c. may be counted &c.

At the third month - weighs 3 to 4 ozs, neck distinct, also the sex; the thorax is now closed and the cord contains no intestine.

Fourth month - 6 to 8 inches long, weighs 8 ounces; large fontanelle, some hair on the head &c. - features still invisible. It is now called a foetus - is viable, and has been known when born at this period to live as long as four hours.

Fifth month - weighs 9 ounces. Sixth, one pound, the eyes are still closed, and the pupils large. By the seventh month it is from 12 to 14 inches long; the testicles begin to descend, the eyes to open and the features to become intelligible. At the eighth month the scrotum

contains one testicle, and by the ninth, both are in the scrotum. At birth the child may weigh from six to ten pounds, and its length be from nineteen to twenty four inches;—the average length is probably eighteen inches, and weight, seven pounds.

After the branchio's absorptive apparatus is in order for the oxygenation and decar=bonization of the fœtal blood, the circulation peculiar to the fœtus, is established, and the necessary elements or pabulum, is furnished it by this means, until it is ejected into the world. In the fœtal heart, there are liter=ally four cavities,- viz - two auricles - right and left; and two ventricles. But a commu=nication existing between the two auricles, - called the foramen ovale or Botalli's foramen, which has on the left side of the septum, a valve - virtually converting the two cavities into one. The left ventricle gives origin to the aorta and the right ventricle, gives origin to the rudimental pulmonary ar=tery, or more rigorously, the ductus arteriosus;

thus converting the four cavities into two, by means of the foramen ovale and ductus arteriosus.

The fœtal circulation may then be said to resemble that of the fish, having but two cavities — an auricle and ventricle. — and the placenta, its branchial organ of aëration, takes up like the gills or branchiæ of the fish the oxygen which it finds in its surrounding medium. Collecting at the same time the plasma, the radicles of the umbilical vein collect the blood, and it is carried along the umbilical vein to the liver, where it is probably mixed still more purely by circulating through that organ by means of the vena portarum, and by the hepatic veins, emptied in common with the circulation in the ductus venosus; and through the ductus venosus it is emptied into the ascending vena cava — which finally discharges it into the right auricle of the heart. Destined to furnish other parts with its pabulum for development,

onward it rushes through the foramen into the left auricle — directed by the Eustachian valve, — thence into the left ventricle by which it is distributed through the aorta to the system — a large proportion going to the upper extremities. This latter blood is returned by the veins of the upper extremities to the descending vena cava which empties it into the right auricle, from whence it passes into the right ventricle, from thence into the rudimentary pulmonary artery, but mainly through the ductus arteriosus into the aorta and extremities, and is returned by the umbilical arteries to the placenta and thus is the circulation perpetuated until the close of utero-gestation.

It is obvious from the foregoing, that the fœtal differs from the adult circulation, 1st in having a ductus venosus, which conveys blood from the liver to the vena cava ascendens; 2nd in having a communication by the foramen Botalli or ovale — from the right into the left auricle,

3d In having a ductus arteriosus which is given off from the pulmonary artery and serves to rid the heart of venous blood, conducting it into the aorta just below the arch, that it may have a tendency to return through the umbilical arteries.

After birth these all undergo a complete metamorphosis,— the foramen ovale is closed by the apposition of the eustachian valve; the ductus arteriosus and ductus venosus are obliterated and shrivel up - while the adult circulation is established.

I say after birth, for if the supply of oxygen to the brain be stopped by the premature closure of the foramen ovale, the evolution of biotic force is checked and since the brain receives no oxygen, there is a want of nerve force and the patient is distroyed by asphyxia. This foramen then, generally closes the second or third day after birth, frequently later, and it has even been seen to exist upon the dissecting table. The pulmonary artery and vein now

become dilated to receive the increased amount of blood - and the circulation, which resembled a short time since, that of the fish and the higher reptiles, now becomes that of the perfect mammal. The fœtus in utero is subject to many changes and malformations which prevent the proper development taking place and hence the not unfrequent imperfect discharge of the respiratory function at birth. There is a natural deviation in the fœtal circulation from the normal function, inasmuch as the umbilical veins and ductus venosus convey arterial blood from the placenta; while the umbilical arteries and ductus arteriosus, convey venous blood to the placenta, again to be aërated.

Having cursorily noticed the development of the product of conception, and its supply of plastic material for such development; and the time having now arrived for the employment of its own respiratory apparatus - in the oxygenation

of its fluids and solids; or for its acting as an independent being, I must now notice (in order) the time for such independent action, or the time for parturition counting from the commencement of pregnancy. I mean the duration of pregnancy and the mode of computation.

It frequently becomes important that the physician should know about the time a woman will be confined, and the ordinary mode of computation is two hundred and eighty days from the second day after the disappearance of the last menstrua. Some again compute from the second week while others again, count three months back from the disappearance of the last menstrua, to which they add seven days and give that day twelve months as the day for confinement. The first of these three modes, is in my opinion the best, and will answer for all practical purposes, when the pregnancy is not premature or retarded; and the time is generally

corrected by what is called quickening, that occurring when pregnancy is half advanced, — the woman is confined therefore four months and a half after quickening.

The usual duration of pregnancy is ten lunars, or nine calendar months, and the day for lying in, is the two hundred and eightieth. But there are many exceptions to this rule — sometimes, the fœtus is born by or before the seventh month — which is an abortion; between that and the two hundred and eightieth day — which would be premature, and the labor may be retarded for several days. Some have supposed that a woman can be pregnant for thirteen or fourteen months, and Dr. Sleigh actually states a case which fell under his observation which was retarded four months and twenty two days. According to the civil code of France a woman may be considered religiously (or lawfully) pregnant for three hundred days.

I do not think that we should be so much astonished at these exceptions to the rule

,- either of premature or retarded labor, when we properly consider the liabilatys to injuries, the effect which frequently occurs from the exhaust=ing and depressing passions, and various idiosyn=crasies of females. We see exceptions to this rule even in the lower animals which live equable and regular lives,- how much more likely then are we to see such exception, in those pampered wifes who go into fits at the sight of a spider, and who, from artificial living, are subject to twenty ailings that to the healthy and regular woman, are total strangers. But some woman actually abort habitually, even when apparently in the enjoyment of health; such cases are truly remarkable and to me mysterious. The irregularity of the monthly effusion, and many other causes, have been alleged as the cause of some such deviations; but none that render the subject significant - or accounts for all such exceptional cases,- and since I am incapable of promulgating any sensible hypothesis upon the subject, I will cease my harrangue.

The uterus, its development and position,

The womb which before pregnancy weighed from one to two ounces, now by its increased vascularity and growth, weighs from twenty to thirty ounces. But the walls of this organ, at term, are not (as might be supposed) thicker than in the non gravid condition. But the vessels, lymphatics, arteries, veins and indeed the whole organ has undergone a complete change in growth, This development of the uterus is not uniform but commences first in the fundus and gradually extends downwards to the body, and finally to the cervix and os-uteri,

The changes which occur in this latter part are highly worthy of our notice - since they enable us to form with almost a degree of certainty the stage of gestation and labor, - by the touch.

The cervix protrudes into the vagina and softens gradually, but does not contribute to the size or growth of the womb until towards the close of gestation.

By the fourth or fifth week the extremity

of the os uteri becomes softer and cushiony, but this sensation to the finger is not as perceptible at this early period, as towards the fourth or fifth month of pregnancy, and by the sixth month one half is soft; by the seventh two thirds; eighth - nearly the whole, and by the ninth month the entire neck has this characteristic softening, and about two weeks before confinement it begins to contribute something to the size of the uterus.

The neck of the uterus in primiparae and multiparae differ in shape - the former being spindle shape; while the latter is more of a funnel shape, and towards the close of gestation, the os opens and the finger can be carried into the fundus or beyond the first opening. The neck during the first three months, is slightly anterior and to the left, - towards the fifth month higher, but still left, and as the uterus rises the neck falls backward, towards the spinal column.

The uterus with its contents remains in the pelvic excavation until between the third and fourth months when it begins to rise – because of its augmenting volume. The diameters of the uterus about the third month of gestation are as follows – vertical 2½ inches; transverse 2¾ inches and antero posterior 2¾ inches. By the fourth month all its diameters – vertical, transverse and antero posterior are 3¾ inches, and it is obvious that the volubility of this organ at this time is too great to be contained in so small a cavity as the pelvis – and therefore it must rise above the superior strait and can at this time be felt two or three inches above the symphysis pubis. By the fifth month the fundus will be found two or three fingers below the umbilicus or nearly half way between the umbilicus and symphysis pubis.

At the sixth month the vertical diameter is 6¾ inches, the transverse 6¼ and the antero posterior 6¼ inches.

Seventh month the womb is still larger and

its fundus can be detected three fingers above the umbilicus which now points instead of being flattened or depressed as formerly.

During the eighth month it is at the epigastrium or half way between the umbilicus and epigastrium. By the ninth month it is as far up as it will go and now begins to descend. At this time the vertical diameter of this organ is from 12¼ to 14½ inches, the transverse 9½ and the antero posterior 9¼ inches. About two weeks from the first of the ninth month the softened os uteri permits the loaded organ to obey the law of gravitation, and it sinks down into the cavity of the pelvis, diminishing very perceptably the protuberant appearance of the abdominal walls. But I should have remarked, that before this sinking, commences the womb does not occupy the mesian line, but inclines to one or the other side particularly in persons of a lax and flaccid habit of body.

This inclination or obliquity of the womb is usually to the left but the result of observation

by different obstetricians differs even in this particular - some contending that the inclination is towards the right and others to the left, and since the shorten condition of the round ligament is almost universally acknowledged to be the cause of this obliquity we have to refer to the condition of the right or left round ligament, for the cause, as the case may be. Other circumstances have been alleged as the causes - viz - the habits of the patient, disposition to the right or left side &c -, but be the cause or causes what they may we have this obliquity in almost every case, but much less so in primiparae, or those whose symmetrical abdominal wall, or muscles counteract the disposition to fall one way or the other, by vigorous contractility.

The size of the gravid womb at term according to Lorset is from 12 to 14 inches long, its breadth from 9 to 10 inches, and its depth from front to rear, 8 or 9 inches, the average weight of the whole organ with its

contents being about twelve pounds. And now since we have a true pregnancy I must observe the symptoms or signs, which are divided into rational or such as occur during the early months of pregnancy, and sensible or physical or such as are manifest also at a later period and upon which we have principally to depend for certainty in our diagnosis.

It is very important that every physician should be acquainted with the signs and phenomena of pregnancy, for errors in the diagnosis are always dangerous. Instances of learning and experience have been known to tap the pregnant womb for ascites and ovarian dropsy. The history of the patient will always prevent the careful practitioner from making such egregious mistakes; but if he be careless, timid, or superficial in his examinations particularly with those who by crime or misfortune have lead to suspicions, he will not unfrequently be misled by the doubtful history he will receive; and by the importunities

of the patient he will be disposed to, or for her chastity, and probably pronounce the diagnosis - dropsy - merely swelling in something contrary to the true condition of the case.

There are many trying difficulties in the life of the accoucheur who has an extensive practice; - conscious of the nobleness and liberality of his profession - knowing that his character should be fraught with delicacy of sentiment; every tenderness of nature, and every virtue of humanity; he is always disposed to vindicate the character of his profession by screening, when practicable, the unfortunate victim of passion, from calumny; but that he may do that profession and himself justice he must give his diagnosis honestly, according to his knowledge - of the signs of pregnancy. But suppose he has no knowledge of these signs? - then I say he is unfit for his office; for he should have these sensible and rational signs indelibly written in his memory - and until then he is incapacitated for forming any just conclusion in any case of a suspected unmarried female.

Fatal consequences have been the sequel of pronouncing an innocent girl to be pregnant. A case of the kind came under my own observation, or rather an error in the diagnosis - for although she did not perish from the unprincipled wound "the fire in the eye and with a green and yellow melancholy, sat like patience upon a monument smiling at grief."

Then what are the signs of pregnancy? - and first the rational?

One of the first is suspended menstruation. We should always suspect a married female to be pregnant in case of suspension of the catamenia, while not giving such; but this is not a certain sign, and if consulted we should inquire more into the history - and if there is morning sickness, fainting and enlarged mammae, milk in the breasts, salivation and about the fourth or fifth month - quickening we may be pretty sure that pregnancy exists.

But we should examine more minutely still, especially in unmarried women.

We should observe the temperament of the patient - see if there is a disposition to pleurisy, and if the blood is fibrinous; if the functions of the stomach, bowels, and kidneys are perverted or altered; the color of the skin is altered, the areolar darkened and their follicles enlarged; moist integuments, freckles, flattened abdomen and navel - but at a late period of pregnancy fronting; costiveness, cramps, quickening, protuberance of the abdominal wall, bluenes of the vagina, histrine and ultimate hardening and relaxation of the womb. Many of these are important signs but not infallibles.

Quickening is an important sign when the astonished mother exclaims - "Good Gracious! the child knocked the dog, which was making for it, off my lap!" But if she is found to be in the habit of using asafoetida or the assimation, we may suspect her flatulency; or if she has previously complained of twitching of the abdominal muscles - too much importance should not be attached to this

valuable sign. This symptom is observed about the one hundred and fortieth day.

Nausea is probably even more important than quickening, but it may occur when the lactical elements are improperly eliminated by the mammary glands, and therefore is only to be depended upon in conjunction with other signs. It is found to be floating on the surface of the urine when permitted to stand for twenty four hours, and emits a disgusting odor - which has been compared to that of old cheese. It is a very important sign.

Unaccountable longings or appetites, and other idiosyncrasies are observed, particularly, in the pregnant wife of the opulent and indulgent husband. These longings are generally restricted to the demands of the palate and stomach, but they sometimes attack other organs of sense and even invade the imagination. Mrs Gizzle was worth pluck three black hairs from the chin of the patient commander Drummer to gratify the longings of her sister, and that sister

had previously to resort to the pulling of her husband's ear before she could subdue the turbulent rising of her inclinations.

A friend of mine once desired that his landlady should always be pregnant, for during her last pregnancy she had amply supplied the table with a change of meats, having previously so rigorously confined him to a regimen of beef-steak that he was reduced to a bashfulness in staring an ox in the face. I knew a foolish thing to send to the next neighbour's for the purpose of procuring a peculiar kind of pear, that she might allay her appetite and "the mental anxiety of her fœtus." But I must no more of my humour in this important subject and unimportant sign of pregnancy.

We cannot depend upon these rational signs alone and since I want those that I can depend upon I must apply to the sensible.

The most important information is derived from the touch or examination per

-vaginam, auscultation, ballottement and the enlargement of the patient, particularly of the abdomen.

The touch is more particularly useful towards the last of the gestation when the softening occurs and when the labor begins — but it teaches us also the position of the os-uteri — it being low in the excavation during the early months and high up during the later.

By auscultation we are enabled to hear the foetal heart, which with the other signs is conclusive. This sound can be heard about halfway between the epigastrium and symphysis pubis, and generally to the left, in head presentation, but a little higher when the breech presents. It can be distinguished from all others by its frequency — ranging from 120 to 160 beats p. minute.

The placental souffle or a peculiar blowing sound may be heard after the fourth month, on the lower sides of the abdomen. This sound is synchronous with the pulse of the mother.

Late in pregnancy we can learn much in some

cases by what is called ballottement. The patient standing the accoucheur introduces one index finger to the os uteri while with the other hand he steadies the womb by placing it over the fundus and suddenly by jerking up the os, the uterus with its contents recedes, and afterwards settles down again.

The most commonly noticed of all signs of pregnancy is the symmetrical growth of the belly, and probably it is the best of all the signs when the patient is at the same time in good health.

Percussion has been practised with advantage. A cold hand suddenly applied to the abdomen has been supposed to incite the child to movements.

I will now recapitulate the rational and sensible signs of pregnancy.

During the first, second and third months the symptoms are suppression of the menses, which continues throughout the pregnancy; change of the mamae; ptyalism; nausea and vomiting, or morning sickness; increase in the size and weight of the uterus and flattening of

the naval; the cervix occupies the centre of the excavation or is slightly thrown forward; the os uteri is round or spindle shaped in primiparae but irregular in form, or slightly open in multiparae; softening of the mucous membrane of the extremity of the cervix.

During the fourth, fifth and sixth months - depression of the naval - until about the sixth month when it may protrude; anorexia, nausea, vomiting and salivation, may or may not exist; tumefaction of the breast increases with darkened areolae; hiesteria in the urine; the abdomen grows apace - the fundus at the close of the fourth month can be felt two or three inches above the symphysis pub, and by the end of the fifth month it is at the umbilicus, and by this time the foetus can sometimes be felt through the elastic abdominal wall, and is then active with life. As the uterus rises the os uteri must necessarily be higher up; ballottement; foetal pulsations; the bruit de souffle; the sixth month the os uteri in primiparae is closed but open some distance in multiparae; one half of the cervix is now soft.

During the seventh and eighth months the morning sickness is ordinarily absent; sebaceous follicles of the areolae enlarged, with prominent papillae; increase in the discoloration of the areolae — in the white being very dark, but in a negro, who I examined a short time since, for an inch and a half in circumference — they were as black as a mink; I could could press some milk from them; a protruding navel and protuberant belly are now characteristic of pregnancy; the fundus at the eighth month is in the epigastric region; foetal pulsations and the bruit de souffle continues; ballottement imperfect or impracticable; softening of the cervix nearly complete; the os uteri open in the multipara nearly an inch, but still closed in the primipara.

During the ninth month — vomiting returns but ceases when the womb sinks; respiration more difficult until the sinking takes place which is about two weeks before labor; auscultation still confirms our diagnosis; the entire cervix is now softened and toward the beginning of labor is opened so that we can feel the

membranes either in the primiparae or multiparae but with much more difficulty in the former. And now our signs are of a different nature. Shrieks or cries of a peculiar kind nausea, vomiting &c – indicate the first stage of labor – but this is a digression from my subject and I must not labour here except with the subject of pregnancy. And in resuming this subject it behooves me here to remark, that since the period of gestation is always embarrassing and perplexing to the delicate and sensitive female; judgment, virtue, humanity and probity, as well as obstetrical knowledge, assist in constituting the accoucheur, – these are the instruments which fit him for the performance of his professional duties, and when consulted, devoid of them, he is unfit for the secrets with which he must necessarily become familiar !!

I have heretofore been writing about natural pregnancies, but females are subject to accident and disease, which not unfrequently render the pregnancy a preternatural one

and before I close I must cursorily notice the nature of such misfortunes.

The pressure of the gravid womb upon the sacral and obturator nerves, not unfrequently produces cramps.

The loaded organ in front of the intestines, prevents partially the natural stimulation which the abdominal muscles receive from succussion being communicated to the bowels, and therefore diminished provocative to the healthy peristaltic motion of the intestines, may be considered as a cause of the costiveness which is common to pregnancy. Probably cramps and costiveness might more properly have been considered among the natural signs of pregnancy than in the diseases. They are seldom dangerous.

The monstrosities to which the structure of the child is subject in utero, seldom modifies the gestation, but only the labor. I should remark as I have not previously done so, that the sounds elicited by auscultation are modified greatly in case of

twins. In some hydropic effusions, auscultation is entirely useless.

I before remarked that the pressure of the gravid organ upon the sacral and obturator nerves frequently produces cramps, but this pressure, it should be remembered, is not exclusively confined to the nerves, but also presses upon the aorta, the iliacs and their branches, retarding the circulation to the inferior extremities and of course causing the inferior extremities to receive an unusual proportion of arterial blood, giving rise to sighing, blushing, dyspnoea, cough, sometimes tendency to paralysis and convulsions, and general appearance of distress.

Primiparae or those with vigorously contracting abdominal muscles are much more liable to the foregoing symptoms than those who have repeatedly borne children, and some females by predisposition are liable these phenomena. The indications for treatment in such cases, are to relax the muscular force, keep the bowels open, and prevent any undue excitement; the

remedies are - warm baths, narcotics, the anaesthetics, venesection, strict regimen, aperients or cathartics, change of position and retirement.

This pressure may also cause oedema or anasarca by preventing the return of the venous blood from the extremities; or the vessels may become enormously swollen or varicose and instead of effusion of serum, these vessels sometimes burst and we have effusions of the blood itself. The extent of the dropsical effusion is not always limited to the bottom, but sometimes extends upwards and also to the external genitals, and cases have been known in which the swelling was universal and symmetrical - deluding the opinion of the friends of the patient as to her growth, and astonishing them, to see the rapid diminution in size so early after delivery. This fact should teach the practitioner never to attempt, by means of hydragogue cathartics, diuretics, acupuncture &c, to remove the effused fluid, but always to look to the first indication in dropsy - to remove the cause; then, it is found that

parturition is the cure of such dropsies as are caused by pregnancy. Then in such cases our treatment must be expectant while we contribute what we can to the comfort of the patient. In hydramia; or if the patient is left in an anemical condition after the disappearance of the dropsy — the indications are to support and improve the system and these indications can be fulfilled by cordials, a nutritious diet, and tonics — such as wine whey, the iron preparations, quinine &c &c.

False pregnancies, or degeneration of the ovum, are truly remarkable phenomena, but I cannot dwell upon the subject, and for the best reason in the world — I scarcely know anything about them.

These pregnancies are said to be caused by an accumulation of wind, physometra; by water, — hydrometra: hydatids, or colonies of sacs filled with water, and moles.

I have not the most remote idea (at this time) of how air or water could be generated and retained in the uterus so as to resemble

a pregnancy; but I can imagine how, by early disease of the ovum faulty development can be established and consequently degeneration and morbid growth. Then pregnancies can be diagnosed from true pregnancies, by the preternatural rapidity of growth; a cushiony and softish feeling to the touch, leaving blood upon the fingers; bloody discharge &c, while the natural pregnancies are characterized by the usual phenomena. In months to be admonished of the first symptoms of dilatation of the os uteri, break up the mass as soon as it is practicable, and extract it.

The constitution generally sympathizes with the local disorder and the great liability to hemorrhage renders the condition of the patient truely perilous. If the hemorrhage is very alarming, and the blood continues to flow the tampon should be employed, after the ordinary treatment for hemorrhage has failed.

I suppose that the hydatids are endowed with individual life, but some authors think not, and I will not interfere with their

conflicting opinions.

The child is sometimes expelled before or by the seventh month, and occasionally before it is viable, or capable of sustaining an independent existence;- this disaster is termed an abortion. Any cause that acts injuriously to the mother, either directly or indirectly, has a tendency to injure the child or womb and bring on uterine contrac=tions. Injuries from shocks, blows, falls, the exanthemata, syphilis, exposure to cold and wet, and the mental emotions act as exciting causes. From some peculiarity in the economy of some females, there is a predisposition to habitual abortion.

These same causes may also act as exci=tants to induce premature labor which is after the seventh month and before the nat=ural term. The pains in these accidents may or may not be more severe than in a natural labor. The symptoms are, great uneasiness, languor, faintness, increased vagi=nal secretion and sometimes mixed with

blood, pains in the back and limbs, rigors, increased vascular excitement and expulsive efforts. The first indication for treatment in cases of approaching abortion, is if possible to prevent it by a prophylactic and preventive treatment; but if that is found impracticable the second indication is to shorten the process, prevent hemorrhage and administer to her necessities. The accoucheur should always act upon the supposition of a living child. For the fulfilment of the first indication we must act according to the condition of the patient. If she is of a full or plethoric habit, venesection, prevent all mental excitement, a cool room, cool to the vulva, rest in a comfortable bed and in a strictly horizontal posture, and a strictly antiphlogistic regimen should be enforced.

If it is found impossible to save the pregnancy and there is hemorrhage the internal employment of astringents may become necessary — alum, acetate of lead, and the numerous vegetable astringents

have been used, and finally if hemorrhage cannot be arrested the tampon becomes necessary.

Prolapsus and protrusion of the womb sometimes occurs, and if possible it must again be returned. Retroversion is a tilting backwards of the fundus and Anteversion is the reverse position. I could say much, as to the causes, symptoms and treatment of these accidents, but I merely propose them here as modifying pregnancy, and truly they are greatly to be deprecated, since they are such formidable accidents.

The fœtus in-utero is liable to many diseases; but I cannot pause to expaciate upon this subject, but must barely mention some of them, — as syphilitic affections, the exanthematous, intermittent fevers — inflammation of the mucous and serous membranes and of different organs; chronic disorders, hernia, hypertrophy; atrophy; worms; calculus, rickets, &c. &c. These various affections cannot of course be diagnosticated in the fœtus while

in the womb. But if by any cause the fœtus is destroyed, absent signs will acquaint us with the fact — such as the fœtal pulsations, the bruit de souffle, suspended motion or action of the child; the sensation of an inanimate substance (to the mother) rolling from side to side as she may choose to change her position; her deteriorated health &c are strong indications, but more certain until the approach of labor, when we can perceive a loose flabby scalp, grating of the cranial bones, pulsation in the fontanelle, absent &c. No one or two signs taken together would prove conclusively, but concurrent symptoms would prove infallibly the diagnosis before the entire expulsion.

But I cannot longer dilate upon the various topics connected with the difficult subject of Pregnancy, and it would be useless for me so early in my medical career to exhaust myself with this inexhaustible subject; and it would be madness for me (as it has been in some others) to attempt the revelation of those phenomena which I cannot comprehend — for it is in

the school of Heaven alone, that we shall find the key that will open to our comprehension some of the secluded mysteries of Pregnancy.

To

the Trustees, Regents and Faculty
of Physic of the

"University of Maryland",
this Thesis upon

"Foot Incontinence",
is respectfully submitted
for the degree of

"Doctor of Medicine"
by
Washington Gaw Tuck
of Annapolis
Maryland
Session 1855 & 1856

Acute Pneumonia.

Apology is scarcely necessary in choosing this subject for my thesis. Pneumonia is a very [illegible] disease. [illegible] [illegible] or fixed combines - but invades, alike the palace of the rich and the cottage of the poor. The aged, the adult, and the infant are each alike liable to its attack. The great importance of clearly understanding this disease, can scarcely be doubted. When we consider its rapid progress. The great frequency also of this malady may be adduced as a reason for the care with which it ought to be investigated, as it is one of the most common inflammatory diseases of the chest. It has its seat in one of the most important and [illegible] organs of the human body. [illegible]

[illegible] physician to inquire
[illegible] it with the most intense
interest and anxiety. The more
[illegible] science [illegible] gives us
[illegible] of its ready detection.
[illegible] understand fully its physical
signs and symptoms. [illegible] should
appreciate its anatomical changes
together with what gives rise
to those changes and as these
anatomical lesions, are well
established I shall devote
several pages of the present
[illegible] to their consideration.
Pneumonia, consists of an
inflammation of the parenchyma
or spongy tissue of the lungs
affecting equally all the
constituents of that organ. The
air cells, the smaller bronchial
tubes, the intervening cellular
tissue and the ~~ramifications~~
[illegible] ramifications. [illegible]
[illegible] been divided into
several varieties, such as the

acute and chronic, and when depending upon a low or typhoid condition of the system it is termed, typhoid pneumonia. and when with bilious disorder, whether dependent upon simple derangement of the liver or connected with bilious fever, Bilious Pneumonia. But it is my intention to speak of the acute variety only of the disease, as that occurring in healthy persons. Acute pneumonia has four distinct stages, viz: the stage of congorgement, the stage of hepatization, the stage of purulent infiltration and the stage of abscess. These stages correspond to different degrees and periods of the inflammation in the first stage, or that of congorgement, the affected portion of the lung is of a darkened colour, externally, crepitates under pressure, though is

to them in health, there is more
liquid substance in the cells
of the lungs than in health. Hence the
lung retains the impression
of the finger. It is heavier
also than in health and
less elastic. Yet almost always
will float in water. When
an engorged portion of lung
is cut, we find it of a mottled
red colour, and from a bright
scarlet to a bloody, livid, and
frothy section. The crepitation
at the same time is diminished.
It is more readily torn, resembling
in that respect the liver, and
accordingly this stage has been
nominated, by some writers,
hepatization of the lungs. For
cells of the lungs which
have described seem in nearly
one half of the dead bodies we
have to examine. Yet we must
not suppose, all of these necessarily
to have pneumonia, so that

then must we look for a solution
[illegible]
inflammation the lung, is of a
brighter red colour, and the
softening greater than in
mechanical congestion. The
position of the congestion, will
aid in forming a correct
judgement. if the congestion
is not in a dependent part
of the lung or lungs (both can
be at the same time affected)
it is surely inflammatory, we
judge also by the antecedent
symptoms. The first stage lasts
for a shorter or longer period.
When the lung is [illegible]
the former healthy appearance
or suffers further alteration. It
is still red, [illegible] no [illegible]
under pressure, the density
is much increased, it will no
longer float on water, but sinks
and the [illegible]
[illegible] than that of the spirit

stage, the softening is so great; that it can easily be torn, and the finger is easily passed through its substance, or sink with little or no opposition. When cut, the lung presents very much the appearance of liver, the cut surface at times presenting a uniform red appearance. Sometimes a variegated appearance produced by an intermixture of the black spots of the lung, and the interlobular cellular tissue, have formed. and others might have termed this stage, the stage of hepatization, when cut, it still presents a reddish fluid under pressure, it is thicker, less frothy, and less in quantity, than observed under similar circumstances in the stage of congestion. The lung is now firm, explicit, friable, and foundations, lying deep in the

ter, which are supposed to be air vesicles, clogged, thickened, and reddened, by the inflammation. This hepatized appearance does not always exist, especially if the disease occurs in aged persons or infancy. In consequence of the obliteration cells by effused matter without them, the same appearance is not seen in a section of the lung compressed by effusion has become red. and the lung, in this stage does not collapse, when the chest is opened, containing no air, remains distended. To such a degree that an impression of the ribs, is discernible. The inflammation now goes on producing still more changes. the lung now assumes a yellow, green, or purple line, speckled with a red, or black pulmonary matter. Of course, in this stage, than in the second stage, so much

So, as I of [illegible] the [illegible] and
pressure of the fingers, [illegible]
then forced [illegible] almost wholly into a [illegible]
[illegible] only rather more condensed,
but in examining the lung in
this stage the most violence
might be required to produce a cavity, which
might readily be mistaken for
an abscess, which is exceedingly
rare in the adult, this condition
is called by Andral, gray softening.
Laennec, however, termed it gray
hepatization. The fourth stage
is characterized by the formation
of abscess, which as I have
already stated is an exceedingly
rare occurrence, the trial, only
once saw abscess, result from
pneumonia, Laennec, in several
hundred autopsies, met with but
a three cases, I presume, in my
experience if ever a question of
consulting, had been only two
of these cases of genuine abscess

[illegible] thing from Pneumonia. It is stated that abscesses of the lung [illegible] in cases that recover, than in those which have a fatal termination; for in the latter case, so much of the lung is involved, that death supervenes before there is sufficient time for the formation of abscess. Gangrene is sometimes though rarely a result of ordinary pneumonia. Though like abscess, it does occasionally occur. In some cases, it [illegible] a small portion of the lung and is limited, in others it occupies a large extent of the lung, and has no fixed boundary, lightening itself throughout the entire lung, [illegible] its [illegible]. Gangrenous lung, is of [illegible] or [illegible] or greenish brown, it is generally speaking, [illegible] the same consistence as an engorged lung, and may

readily be detected by the fetid
odor it emits, so much so, that
it is almost impossible to remain
in the chamber of the unfortunate
patient. The four conditions which
I have described, are sometimes
but not always, well marked —
the pneumonia meet with them.
Once yet, somewhat after this
fashion, in a portion of a regulated
lung we meet with spots of
red hepatization, and in the
midst of the latter we find
spots of gray hepatization.
These give a mottled appearance
to portions of the diseased lung.
Pneumonia, may be either single
or double. That is it involves
one lung or both, as the case
may be, but it is infinitely more
common in the right lung,
than, in the left lung, the
proportions are eight, to one,
in favor of the right lung.
The reason why it are so frequent

has not been stated, the lower lobe of the right lung, usually the affected portion, Hunter, found that in eighty cases, the inflammation affected the lower lobe forty seven times, the superior lobe thirty times, and the whole lung at the same time in eleven cases. Having discussed most of the conditions, which occur in inflammation of the lungs, how by what signs can we recognise them, as the general and local symptoms are in many cases, wanting, the only method will be by aid of the ear as we have no means of looking directly, into the cavity of the chest. The examination of the chest by means of the ear, has been called auscultation, By this method, the lungs, are enabled to inform us of their condition.

When the ear is applied in the first stage, or that of engorgement, we have a variety of sounds which are variously stated. We have the peculiar crackling sound, the finest possible kind of crepitation, which has been illustrated by a resemblance to salt scattered over any hot surface. A very favorable correct idea of the sound, may be formed by rubbing a lock of fine hair between his fingers. This crepitation is principally heard during inspiration and is supposed to find the nearer inflammation is to the surface of the chest. This sound is characteristic of pneumonia, and assures the nature of the disease at first, and as the inflammation advances, entirely supersedes it. Percussion in the first stage, presents no evidence of

the condition of the lungs, just as the inflammation advances towards hepatization, no sounds are produced, the vesicular murmur is abolished, by the exudated fluid, and this gives place to a sound resembling that of blowing through a quill. Little puffs of air are blown in and out, more distinctly heard at the termination of a cough, this sound is called bronchial respiration, or bronchophony, percussion now gives entire dullness throughout the hepatized lung, and we can trace the disease no farther with certainty, until a cavity is formed, and then we have cavernous voice, cavernous respiration, and metallic tinkling, and other signs of a cavity, post mortem find after death, the different stages of

pneumonia, existing in different portions of the lung. and of course during life, we have sounds indicative of these various lesions, "bronchial breathing here, minute crepitation and dullness on percussion there,, and in another portion of the lung puerile respiration, these sounds continue until death. or the lung reverts to a state of health. When we have again crepitation, which lingers some considerable period after the disease. The above are some of the signs, which reveal the anatomical lesions in pneumonia, when taken in connection with the general and local symptoms. give certain and infallible evidence of the nature of the disease. Pneumonia is generally preceded by a chill, followed by febrile reaction. difficult

breathing, cough, and pain in the side or back of the chest. The local symptoms and fever sometime occur, without the chill, especially in infants. There is also in many cases a scanty, viscid expectoration often thoroughly mixed with blood. The pain usually in pneumonia, is not very great. uncomplicated, but when pleuritis exists with it, it is of a sharp, lancinating nature, situated a little below the nipple. The pain diminishes as the disease declines, and is much aggravated by cough, by full inspiration, or by pressure upon the sides or intercostal spaces, or by change of position. The patient lies constantly upon the unaffected side. The breathing is quickened, the number of respirations may be increased from about eighteen or twenty, the

natural standard, to thirty, or even sixty, in a minute, attended also with great difficulty of breathing. The dyspnœa is sometimes very urgent, causing the patient to assume nearly the erect position, it however varies in different patients. Sometimes being mild, and in other cases being exceedingly distressing, especially when the upper lobes of the lung are attacked. The cough is usually dry from the outset, accompanied however in a very short time by its peculiar sputa, and is so tenacious, that the vessel containing it, may be turned upside down, without its contents being poured out. The expectoration is of a transparent, rusty colour. This viscid and rusty coloured sputa, is one of the most characteristic pecuiar signs of pneumonia and indicates its existence when

When the physical signs fail.
Fever is always present more or less, particularly in severe cases, and constitutes together with increased frequency of respiration, the only certain phenomena. It varies exceedingly in degree, being sometimes so mild as entirely to escape notice. but often it is very intense, attended with head-ache, from which the patient seems to suffer more, than from the pain in the side, and is often, the only pain complained of, for several days. This fever often assumes the remittent character. The exacerbations occurring daily, generally towards evening. The pain, cough, dyspnoea, and blood expectoration being generally increased. The pulse in this stage being full, strong, and accelerated, reaching sometimes to

one hundred and forty or sixty in the adult. The blood drawn buffy, frequently strongly cupped. The skin as a general rule, hot and dry. Urine scanty and high coloured. Thirst and loss of appetite always. The tongue is usually moist. Covered with a white, or yellowish fur. Sometimes very bright red. The patient is often constrained to take to his bed, at the beginning of the attack. but in mild cases often, attends to his ordinary duties, several days, before he is compelled to desist. Many cases of pneumonia are so obscure, that many cases have run their course, without being suspected. before the discovery of percussion and auscultation. The physical signs then, are of the greatest utility and importance to us. diagnosis of Pneumonia. The diseases which it is most liable

to be mistaken for, are bronchitis. pulmonary oedema, pleurisy, and certain states of phthisis. It can be distinguished from bronchitis by observing that in bronchitis the sensations are more those of soreness than acute pain, and are situated in the anterior and upper part of the chest near the sternum. The expectoration though sometimes streaked with blood, never attains the viscid and rusty character of pneumonia, and when it begins is more copious. Persistent rale, is never heard, but in its place dry and mucous rale. Bronchial respiration is wanting. The respiratory murmur always in bronchitis, there being also very slight dullness on percussion. The two diseases are sometimes combined, and when pneumonia is in the centre, or scattered in the lung

it is difficult if not impossible to distinguish one disease from the other. Prognosis. In primary pneumonia, not complicated occurring in persons of good constitutions. There is every reason to hope for a favourable termination of the disease. The disease is also mild in young subjects. In persons advanced in life or occurring in those who have already been debilitated, by previous disease. The prognosis as a general rule, is unfavourable, also when there is a marked tendency to phthisis the termination is generally fatal. The causes of pneumonia, are numerous. Atmospheric changes are the most frequent causes. Exposure to the cold when the body is warm and perspiring. Direct violence. excessive use of the voice. powerful emotions. the sudden disappearance of

cutaneous eruptions, are said to be the occasional cause of an attack. A long and continued position upon the back, is thought to give rise to the disease, in debilitated persons. The treatment of acute pneumonia. The great remedies to be employed in this, as in other inflammatory diseases, are venesection, Tart. Antimony and Mercury. At the head of these remedies stands blood-letting. It acts not only by its influence over inflammation but also relieves the lungs of a great portion of its burden by diminishing the amount of blood to be distributed, and thus we gain, what we try to do in all inflammations. a more or less perfect rest of the affected part. The question naturally arises to what degree shall venesection be carried and what is the best position to bleed the patient in. The patient should

be in the erect posture, and our guide as to the amount of blood to be taken, we should bleed until all urgent symptoms have abated, and if necessary to syncope. The bleeding may be repeated a second or third time, if the case should require it. Cups and leeches have a good effect after general bleeding. These active means are only advisable, in the stage of engorgement. The inflammation when advanced, to the second stage, requires only moderate blood letting. It will be found beneficial in diminishing the force of the heart and arteries. Thus tending to prevent the extension of the inflammation, by lessening the quantity of blood circulating through those portions of lung, which are still serious, and will relieve the dyspnoea, after arterial excitement has been subdued.

he can assist the patient, recovery by repeated doses of Tart. Emetic and Calomel. The former being adapted to the stage of engorgement. The latter to the stage of hepatization. The tartar Emetic, is not given in doses to produce emesis. but in smaller doses, such as from the quarter, to a half a grain, every two or three hours, in order to produce a tolerance of the drug. if it should produce vomiting an effervescing draught should be administered in its place. The following formula will be found very useful.

℞

Tart. Antim. et Pot. gr. VI.
Syrup. Simplicis ℥ss.
Aquae Cinnamon ℥ VI.

M. A tablespoonful every two hours. If the inflammation should subside the remedy may be intermitted, until it shows a disposition to return. When the

same means may be again had recourse to. When the inflammation has reached the stage of hepatization, Mercury is the remedy to be depended, This should be used in small doses, given at short intervals until the gums are affected, a small quantity of opium may be given with the mercury, to prevent its passing off by the bowels. At the same time that this plan of treatment is carried on, a blister might be used with advantage applied over the chest- it should be large. And should the case linger the blister might be repeated with advantage from time to time. Should the patient's strength begin to fail, in the advanced stage of the disease, stimulants should be used, such as Carbonate of Ammonia, in two and a half or five grain doses.

Sulphate of Quinine, Wine-whey, Ipecac &c. Counter irritants, such as blisters, tartar emetic, mint oil, or Mustard Plasters, may be applied, when there is a sensation of pain, tightness or oppression in the chest, and when the fever is no longer high...

AN INAUGURAL DISSERTATION ON PHTHISIS

Submitted to the Examination

OF THE

PROVOST REGENTS & FACULTY OF PHYSIC

OF THE

UNIVERSITY OF MARYLAND

FOR THE

DEGREE of DOCTOR of MEDICINE

BY

THOMAS M. JORDAN

of

PENN.

1856

Phthisis Pulmonalis

One of the most painfully interesting diseases with which the practitioner has to deal; A disease that we not only [illegible] hospitals, or in the dwellings of the poor and destitute, but a disease which goes on in its destructive march, without regard to age, sex, occupation, or rank, thus consigning to premature graves many of the fairest and brightest of Creation. It is a disease that has brought grief and mourning into the Habitations of many among us, one has taken us of some of them, [illegible] most dearly [illegible] while the very mention of its name gives [illegible] almost all hopelessness as it is [illegible] for it seems to

me that it is a disease which
[illegible] in every [illegible]
in Indian is equally [illegible]
[illegible] every; this malady is perhaps
the greatest existing scourge of
the human race, at least
[illegible]
Climates.— It is [illegible] to
[illegible] of the [illegible]
[illegible] of the tropics.— From the
[illegible] of [illegible], it appears that
in relation to our own country,
the deaths from it are in
Boston and New York rather less
[illegible] one-fifth of the [illegible]
[illegible], in Philadelphia and Balti
more, [illegible] one-[illegible]
Nydrosis and Chorea.
Though there is reason to
believe, as recent pathologists

[illegible] to [illegible] that
the pulmonary affection is a
[illegible] to [illegible]
[illegible] the system, [illegible]
discoverable proofs; the first overt
act of this disease, is the deposition
of tuberculous matter in the lungs.
This appears in different forms
and with different characters, being
sometimes deposited in small
reddish well defined bodies
denominated tubercles, sometimes
irregularly infiltrated into the
pulmonary tissues, and in relation
to its sensible properties, having
in a firm consistency,
the grayish translucent appearance
to a yellowish opacity with or
without hardness. — Gray Tubercles
and Yellow Tuberculous infiltration
tissue are by no means exclusive

the whether yellow tubercle is
originally deposited — [illegible]
a [illegible] of the [illegible]
of the gray granulation.—
On observing upon dissection, it
varies in size from the mustard
seed, up to [illegible] the size of a
egg, is irregularly vascularized, and
consist of a yellow [illegible]
friable substance, which easily breaks
up between the fingers.— The next
change in the tubercle is that of
softening.— This usually begins
in or near the centre, and gra-
dually advances towards the circum-
ference, until the whole tubercle is
converted into a soft pulpy, or
yellowish mass, not unlike pus
in appearance.— At this stage, the
irritation of the confining matter
produces inflammation of the adjacent

parts, which at length pass in ulceration, and thus opens a communication between the tubes and bronchial tubes.— The matter now escapes, and is expectorated, leaving a cavity.— Cavities thus formed (as Dr Bennet has shown in his first work on tuberculosis) have a constant disposition to cicatrize, and heal: and were it not for fresh deposition taking place, a permanent cure might be confidently expected.— Phthisis (says Dr Bennet, in its incipient stage) may be considered a very curable disease; indeed, so much so that cure is, spontaneously accomplished, by nature, in a vast number of cases.— But the means of checking and controlling it on a large scale, must be sought, not in drugs, but in hygienic

conditions, and the diffusion among medical men of that knowledge, skill requisite for detecting the disease in its early stages.— In short, one of the most efficacious remedies consists in those practical instructions of the medical student at the bedside, which are now so systematically carried on in the clinical wards of many Hospitals.—

Symptoms, Course, &c

First Stage. Phthisis begins in different modes.— Most frequently, perhaps, the first symptom is a short, dry, hacking cough, slight at the commencement, so as often not to attract notice, but gradually increasing, and, after a long, obtuse, with expectoration, first of transparent mucus, and afterwards of white, or yellowish opaque matter, as in common Catarrh.

The appetite is generally good for a time, most of the functions are regularly performed, and the patient is scarcely sensible of any diminution of strength. Perhaps, upon the occasion of unusual exertion, there may be some shortness of breath, and a more than ordinary feeling of fatigue. The pulse is often accelerated, especially during exercise; and as the complaint advances, the patient experiences febrile sensations towards evening, with flushing of the cheeks, and heat in the palms of the hands and soles of the feet. Occasionally fugitive pains are felt between the shoulders, in the side or beneath the sternum.—

The most characteristic symptom is a slight but progressive, cough

-tion, which cannot be ascribed to any failing of the spirits or digesting powers, and seemes out of proportion to any existing cause of disease.— This however is not a uniform attendant upon this incubating stage.— Dr Hope says, the sympathetic allagothes are frequently such as occur in other complaints, especially dyspepsia; and it is not uncommon for patients with the latter affection to entertain serious apprehensions of phthisis, which Hosp. really consumption, have such fears.— At length the increase of cough and fever, the occurence of sever pain, or, perhapes still more frequently, an attack of hemorrhage from the lungs exists. Sometimes the hemorrhage, is followed by an amelioration of cough,

power and pains, and the patient feeles much better, and even believes himself recovering. -- In other instances, it marks an aggravation of the disease, the progress of which is afterwards much more rapid; occasionally the haemoptysis is rare again and again and in some cases, the patient is seldom being without the discharge of some blood from the lungs. -- With respect to the symptoms of phthisis. Dr T. Thompson, observes; in a large proportion of individuals afflicted with phthisis, at a very early period of the disease, and even in the members of consumptive families, amongst whom distinct manifestations of the malady have not yet appeared, you may observe a peculiar, transparent appearance

of the edge of the gums, where they are reflected over the teeth, apparently resulting from fineness of structure; in other instances, especially if erethism of the mucous membrane exist, you may observe a border of lake or vermilion tint, such as we might suppose to originate from congested blood in the capillaries attracting oxygen with great activity. — Three years since, says Dr Thompson, when my attention was first directed to this inquiry, I observed this appearance in twenty out of the eighty consecutive cases of phthisical males, and in thirteen of twenty-one phthisical women; more recently, on repeating the investigation, thirty of forty-three women, and ninety-two of one hundred men exhibited one or other of the manifestations of

gingival border which have been described. — Dr J. says I have pursued the inquiry to some extent as respects this condition of the gums in other diseases, and have hitherto found it, except in persons who either were the subjects of phthisis, or who have subsequently become so. — I believe, this being to have much diagnostic value in early, or, still more in threatening phthisis, when unaccompanied by any other morbid condition adequate to explain its occurrence. — Since the above publication (June) 1857) I have carefully examined the gums of patients in the Bath Infirmary, and have found the line, above described, distinctly marked in about one half of all our phthisical patients; but have not observed it in any case when we had not reason to suspect phthisis. —

It has been quoted, that the teeth of the consumptive are usually remarkably good; there seems to me to be a fallacy in this statement. In consumptive persons they are frequently carious, but usually peculiarly delicate; pearly, or glassy — both having the firm, ivory-like, opal characteristic of a healthy condition being in such persons rare. When we reflect how soon the teeth obtain their characteristic organization in the body; it seems to be powerfull evidence for the opinion, that phthisis is for the most part related to a constitutional affection associated with the conditions of early growth. Amongst individuals predisposed to phthisis, we finds many, pale, and premature, wise; exhaling like the early dew before the morning sun.— Among

individuals. Thus constitutions will be found, many remarkable for intellectual activity, ready memory, quick perceptions, alert emotions, sensitiveness of sympathy, practical temperament, &c. They can work early in the morning, they are not easily fatigued by intellectual exertions; they engage energetically in the ambitious pursuits of life. — Dr Thompson, mentions a young gentleman, full of ardour, working day and night on some animating object of study, was told he ought to rest but replied, he does not need rest; that he never had the headache, and was never ill. — He was told he ought to retire early, by such cautions, and that not to be fatigued by them was useless. He disregarded the admonitions. — Shortly afterwards he had haemoptysis. — Other indications of mischief in the lungs appeared. In a few

months he dies of consumption.
Second Stage.— This often comes on so gradually that the precise time of its commencement cannot be fixed.- There is not unfrequently an increase of fever preceding the opening of the tubercles, consequent probably, upon the inflammation exciting by the matter of the tubercle, seeking an outlet through the lungs.
But in many instances, this second stage sets in gradually without any such premonitions; and occasionally burst at once upon the patient almost without previous warning of any kind.
The most characteristic symptom of this second stage is the purulency of the expectoration, which is now decidedly purulent, and generally in distinct well defined masses, with an occasional accompaniment of softened tubercles, in the shape of small lumps of yellowish

phlegm or mucous matter.— The cough is now generally increased, and is especially troublesome in the morning, when the accumulations of the night are to be discharged from the lungs.— The fever now assumes decidedly a remittent character.— The pulse almost always frequent, becomes more so at some period of the twenty four hours, generally towards evening; and this exacerbation is accompanied with increased heat of skin, flushed face, often circumscribed upon the cheeks, and a remarkable clearness of the conjunctiva and general brilliancy of the eye.—

The patient frequently perspires during sleep, and, in the progress of the complaint, the night sweats become profuse, and exhausting. They are not necessarily connected with the febrile paroxisms; but continue when these

are suspended, and are sometimes very [illegible], even in those cases in which the pulse is little excited. Sharp pains in the side and posterior parts of the chest are frequently experienced, which are sometimes neuralgic, but oftener probably the result of pleurisy, which is said to be a very common accompaniment of phthisis. The purulent expectoration is now very copious, and this, together with the exausting night sweats, and the constant irritation of the system, hastens the progress of debility, and emaciation. At an advanced period of the disease, the stomach and bowels often become involved in the disease. The patient suffers from frequent attacks of diarrhoea, which are very exausting. They occasionally [illegible], with [illegible]

night sweats, but not unfrequently the two discharges are simultaneous.

Among the symptoms now presenting, in one or another case, are oedema of the extremities especially of the feet and legs; redness of the tongue, with the loss of its papillary appearance, and an aphthous condition upon its surface; a total loss of appetite, and an approach to prostration of strength. —

The adipose matter is almost wholly absorbed, the muscles are wasting, the cheeks are hollow, the eyes sunken; and the bones everywhere prominent, unless concealed by oedema. — At last the weakness becomes so great that expectoration is no longer possible; the cough ceases; the matter accumulates in the lungs, and life ceases.

because respiration cannot longer be carried on.—

Hemorrhage.— This is one of the most striking features of phthisis. Sometimes the hemorrhage is copious, but more frequently it is slight, and in itself insignificant. It almost always yields readily to remedies, or subsides spontaneously.— In some cases, there is only one attack, in others the attacks are frequent; and they are more apt to occur in the first than in the second stage of the disease. Though a frequent symptom, there are many cases in which it does not occur from the commencement to the end, only so far as merely to stain the sputa.— It is among the most certain diagnostic, symptoms of phthisis. When a patient with a chronic cough,

spits blood copiously, he may be regarded, as almost certainly tubercular. — Louis states, that, since his attention had been directed to the subject, he has seen haemoptysis in no other affection than phthisis, except in females attacked suddenly with amenorrhoea, and in cases of external violence. The same author, in his great work on phthisis, expresses the opinion, that, with the exceptions just named, haemoptysis indicates, in a manner infinitely probable, whatever may be the period of its appearance, the presence of tubercle in the lungs."

But it seems to me that this learned, and most accurate observer has, in this instance, drawn an incorrect general inference from his own personal observations.

I presume that every practitioner of large experience, has known numerous instances of spontaneous remission of the ~~treat~~ lung of the male subject, from which the patients have perfectly recovered, without, through the subsequent course of their lives, showing any signs of phthisis.

Physical Signs.— In the early stages these are somewhat equivocal. When the deposition is considerable, some dullness on percussion may be perceived, under the clavicle, and by percussing upon that bone. This sign is more significant, if the dullness on one side is decided by greater than on the other, an especially if greatest upon the left side. Among the first deviations from health detected by auscul-

-ilation, is feebleness and loss of the vesicular or respiratory murmur, beneath the clavicle, or over the superior edge of the scapula. While this is observed in one part, another may yield a more than usually loud sound, in consequence of being compelled to perform a greater duty. — As the consolidation advances, the inspiration becomes somewhat rough, and bronchial, with a continuance, or prolongation of the expiratory sound, which is one of the most striking characteristics of this stage of the pneumonic deposition. — At the same time, the inspiration is sometimes interrupted or jerking. The sounds of the heart are more distinctly audible. — The vocal resonance and that of the cough, are

also increased.— Another physical sign is the increased vibratory motion from the voice, felt by the hand applied to the subclavicular space.— All these signs may, as in general, appear, though in a less degree, over the upper lobe of the respiratory.— They indicate solidification, more or less complete, of the pulmonary tissue; and, when this takes place under the clavicle, without the existence of acute pneumonia, the probability is very strong that it is owing to tubercles.— In a more advanced state of the deposition, the mucous cells become inflammed, make themselves heard in the same positions.— Respiration is still more dull than before, and the vibrations produced by the cough are

voice still more perceptible by the hand. They frequently for the upper part of the chest is drawn, contracted, or flattened, and there is less movement of the ribs in respiration. In general, ~~the par~~ the progress of the formation of a cavity can be followed with considerable accuracy. — At first, a loose crackling sound is heard during inspiration, at a part where inspiration ceases, the bubbles become more numerous, larger, and somewhat more diffused, and are audible both in inspiration and expiration, and finally all the signs of a cavity are perceptible. — After the formation has ceased, a number of signs are presented. — Percussion usually remains dull, the increased vibratory movements of the walls of the chest with

speaking and coughing continues, the contraction of the cavity, the vibrations, and its corresponding amount of motion, are still observable.

But the peculiar sounds of cavities are now perceived; as the cavernous rale or gurgling when the cavity is partly filled with liquid, cavernous respiration and resonance of voice, and at length pectoriloquy.—

Sometimes, when the cavity is very large, the respiration ~~the respiration~~ becomes amphoric, the voice acquires an amphoric resonance, and the sound denominated metallic, tinkling may be heard. When other means fail, the existence of a cavity may be detected by a sound of fluctuation produced by coughing, or a slight sound of the same nature, occasioned by the impulse of the

heart or the contained tissue.
In some cases where the cavity is very large, and near the surface, it gives by percussion a hollow tubular sound, same such as is produced by performing percussion over the trachea, or an amphoric sound like that which results, from striking, to distinct clicks, known by Laennec as the crackle-jo. sound, and consequently [illegible] to that occasioned by striking the nails against the when warm, held against the knee so as to allow the air to be forced from between them.—

Duration.— The duration of phthisis is exceedingly variable.— While some cases run their course to a fatal termination in less than a month, others have been known

to continue for thirty or forty years. — The greatest number of cases however, terminate in from one to two years. —

Causes. — The causes of [illegible] are either those which create a morbid state of the system, or those which call it into action when it might otherwise remain quiescent. —

First Predisposing Causes — Decidedly the most important of these, so far as known is inheritance. Phthisis is [illegible] a hereditary disease. One parent may often entail it upon the offspring, but both almost with certainty. — Whole Families thus are not unfrequently swept away by this cruel malady. Even in the immediate descendants of tuber-

-umption parents escape its development, they nevertheless often retain the predisposition, and have it down to their children. — I am acquainted with a family in Pennsylvania, the father of whom is descended from consumptive parents; said Father and Mother still living, at the venerable age seventy years, but have just buried their fifth and last child, each of the five having died between the age of twenty and thirty of consumption.

Dr. S. H. Grant says, the more the nature of phthisis is examined into, the more do I feel persuaded it will appear that the causes are not hereditary influences, but vitiated atmospheric, etc. etc. although these may exasperate,

but almost invariably such circumstances as indue, imperfect nutrition; resulting from an improper quantity, quality, or assimilation of food. —

Whatever has a tendency to prevent long continued, debility will generally, in some persons, the consumptive diathesis. — Hence we may conceive, among the predisposing causes, a long continued fast or excessive, or insufficient diet whether as to quantity or quality, living in an unwholesome air, sedentary habits, exciting indulgences, grief, anxiety, disappointments, whether of the affections or business, and all other depressing emotions, long watchings, copious evacuations, the spontaneous and artificial, the

abuse of mercury, and the influence of various debilitating diseases.

Exciting Causes.— Any thing which is capable of irritating or inflaming the lungs, or producing in them an unusual secretory effort, may act as an exciting cause of the disease in persons predisposed to it.

Thus cold, as by its continued action is a powerfull cause of the diathesis, so also by its intermittent action, is a not less powerful exciting cause of the local affection.— The period of puberty appears to be an efficient exciting cause, as are also the suppression of long continued menstrual evacuations, the too hasty resolution of internal scrofulous tumors, the healing of old ulcers, and the cess

-ction of the mucous membrane
-bearing.— "Tight" lacing has been
accused of frequently inducing con-
-sumption, and it is highly pro-
-bable that, by interfering with the
functions of the lungs, it may
favour the formation of tubercles
in those predisposed to them.

The diseases which are peculiarly
prone to be followed by pulmon-
ary mischief, are measles, scarlatina,
typhoid fever, syphilis, and all
pulmonary inflammations, bron-
-chitis, pleurisy, & pneumonia.

Diagnosis. Given the disease of
auscultation and percussion, there
is comparatively but little difficul-
-ty in recognizing phthisis.

When a short cough, without pain
day or attended only with slight
mucous or pectoration, or lower

for weeks or months, with many or less general emaciation, which cannot be explained by loss of appetite, or any apparent faults of digestion, that is reason to suspect the existence of tubercles. — If to these symptoms are superadded irregular pains between the shoulders or about the breast, frequency of pulse, and shortness of breath upon exertion, the suspicion becomes very strong. — An attack of haemoptysis would now complete the proof. In the absence of this, or in connexion with it, the occurrence of dullness upon percussion in the subclavicular region, or any considerable deviation from their healthy character in the respiratory sounds, or vocal resonance, in the same part,

would, in addition to the symptoms above mentioned, render the existence of phthisis quite certain.

There is however one condition of the disease, in which the physical signs often quite fail in establishing the diagnosis, and it is necessary to depend upon the somewhat equivocal evidence of the general symptoms.—

I here allude to that form of acute phthisis characterized by diffusion of miliary tubercle through the lungs.—

Prognosis.— In the vast majority of cases this is certainly unfavorable; but it would seem from the observations of recent pathologists that phthisis is not in all cases necessarily fatal.—

On the contrary, it would seem,

from numerous cases recorded by Bennet, and others, that in one stage or another, it is occasionally cured, or at least ends in perfect recovery. — Dr Bennet states as his conviction that the general notion of the incurability of phthisis, is mainly attributable to the fact that it is not recognized until it be far advanced. —
Dr Hoos relates two instances of cure that occurred in medical men of Philadelphia. — One of these patients was affected when a young man, with all the symptoms of phthisis, including frequent attacks of hæmoptysis, severe cough, hectic fever, &c. from which he completely recovered, and continued exempt up to the time of his death, which occurred many years after of

typhoid fever. The other in an old lady of [illegible] years, whose symptoms of phthisis, and, after her death at an advanced age, was found to have an old cicatrix of the upper part of a cavity, which was obviously the remains of tuberculous caseous.

We may therefore, always entertain some hope, if applied to in the early stage, in cases of no great severity, of seeing a cure effected. Even in cases which appear to offer no chance of ultimate recovery, we may hope to be able to prolong the duration of the complaint, and sometimes to even add years to a valuable life.

Treatment. As tubercles, when once formed, almost always run

their cause, notwithstanding all the remedies that can be employed, the prominent indications in the treatment of phthisis appear to be, first, to prevent the further deposition of tubercles, and secondly, to guard the lungs and system at large against their injurious influence during their progress.

So far as we understand the tuberculous diathesis consists, in a deprivation of the general tone and vigour of the system, and of the character of the blood. Our object therefore should be to restore the vigour to the solids, and a healthy state to the circulation. Hence the most adapted to these ends are good nourishing diet, and exercise in the open air. To be efficacious

most as vigorous as ever, con-
-tinue. Riding on horseback is
then strongly advised in this sa-
-lier period of the disease. Its
main advantages seems to arise
from its allowing the enjoym-
-ent of fresh air, air of exercise,
without putting the patient out
of bed, and this seems to be
as great. It is affirmed that in
many phthisical patients suffering
from cough, and those affected
with haemoptysis cease to spit
blood, so long as they continue to
ride, walk, or stretch. I can
not, however, to look upon ex-
-ercitation as so certain a cure in cons
-umption, as did the great Sydenh
-am, who says that riding on horse
-back is as much a specific in
phthisis, as the peruvian bark

is far an begin. — Perhaps not in importance to sweating is a proper regulation of the temperature of the body. — The patient should sedulously guard against the depressing influence of cold. —

While in the house, the patient should take care never to allow himself, if possible, are especially cover himself warmly in bed. — While thus avoiding the general sedative influence of cold, he should equally avoid that partial application of it, and that sudden alternation with warmth, which are so apt to occasion bronchial or other inflammations. To insure, in, advantages of warmth, it may be advisable, that, if sitting in cold regions, he should always wear,

-winter to those which are warm-er.— The regulation of diet constitutes an important part in the treatment of phthisis.— We find a great discrepancy of opinion among authors and practitioners in respect to the regimen, which consumptive persons should follow.

One man gives all his phthisical patients beefsteaks and porter; another restricts all his vegetables and asses' milk; and each will boast and bring forward most triumphant examples of the success of his system.— The importance of careful and discriminating attention to the peculiarities of each individual constitution must not be overlooked.— Still there is any medicine so safe, and in a large proportion of cases so useful,

that it is now in very general use. — Perhaps there is no subject, the value of which has been in a short time established by so large an accumulation of evidence, as Cod liver Oil. —

Dr Bennet says, since I introduced cod-liver oil to the notice of the profession in his country, as a remedy for phthisis (in 1841), I have continuously prescribed it in hospital dispensary, and in private practice; I may say that I have tried it in a large number of cases, and have observed its effects in all stages of the disease, and under almost every circumstance, of age, sex, and conditions; I may use the most extensive opportunities of examining the bodies of those who

have died after taking it in considerable quantities, and am still observing the cases of many persons who may be said to have come under my care to its employment. It was certainly easy for me, therefore, to write, at length on this subject; but it appears to be unnecessary to insist on the utility of a remedy which the experience of the last twelve years, has rendered so obvious. — It needs only be said with regard to cod liver oil, that, although at first many eminent practitioners have felt more or less skeptical as to its value, and have therefore delayed giving it. I have not heard of any who, after employing it in a few cases, has relinquished, any doubt of its

its importance in cases
are consumptive cases. —
It is not to be an object of in-
-terest to determine whether other
oils not derived from the liver
of the Cod possess similar
powers:— In 1841 Dr. Young
made many experiments on
the use of Gelts & number of
oils. Such as neats foot oil, a
marine oil, olive oil, cocoanut oil,
and the oil of Sunflowerseed;
he has thinks the neats foot oil,
and cocoanut oil, quite comparable
with the cod liver oil and
was not found to, some, benefit
to result from the use of
the others. — Since the first of
March 1855 we have been using
in the Bill Infirmary Davis's oil
as a substitute for the cod liver

oil. I think I have seen marked improvement in some phthisical patients under its use.—
Counterirritation is often of service: mustard, poultices, etc. the chest wh[illegible] in it is painful; or a blister or suppuration or tiste, or [illegible] ion by croton oil or turpentine ointment, to encounter the local symptoms.— The night sweats which occur in the last stages are by stimulating or astringents are to be controlled by bromat. Sulphur. acid; Kino powders, camphorated opium, lot. of zinc &c &c
When the cough is very troublesome, and especially when it breaks the patients rest at night, we must endeavour to quiet it; and there is no drug, that we can more depend upon for

that purpose their opinion.
The limeling of acarite and Hy-
oscyamis bells has been highly
recommended.
But often times [illegible]
all that we can attempt to
do is to relieve the most wre-
tched symptoms, and to mak
easier the patients lot.
And by this, means endeavor
to smooth the pillow of the
patient dying of Consumption.

AN

INAUGURAL DISSERTATION

ON

PNEUMONIA

Submitted to the Examination

OF THE

PROVOST REGENTS AND FACULTY OF PHYSIC

OF THE

UNIVERSITY of MARYLAND

FOR THE

DEGREE of DOCTOR of MEDICINE

BY

W. JANNEY BEST.

OF

VIRGINIA.

1856.

To
Prof. Lloyd Chase & H. L. L. Lowry
My worthy and respected Teachers
of the Science and practice of Physic
this is
the respectful inscribed
by the
Author

Pneumonia

I have chosen as the subject of my Thesis that very interesting disease, Pneumonia, or inflammation of the parenchymatous tissue of the lungs. I have not selected it on account of its great importance, (though it certainly is) but because I have seen it and studied it as it exists at the bedside of the patient. Pneumonia might be defined, an inflammation attacking the proper substance of the lungs, but it is mostly complicated with pleurisy, and according to some excellent authors it never occurs without the pleura participating of some degree of inflammation. I shall here write of it only as it attacks the lungs and since by means of auscultation alone, can we recognize the various stages of inflammation going on in the chest, I shall commence with the morbid anatomy, or physical signs.

Morbid anatomy. Pneumonia may be divided into three well marked and distinct stages, varying according to the degree of inflammation.

The first of these stages is that of engorgement. The substance of the lung is engorged with blood or bloody serum, it is of a dark red colour, tex-

-mally and crepitates less than natural under pressure of the finger, it contains more fluid than in its cells, it is heavier than natural, inelastic, and pits or retains slightly the impression of the finger. When cut it presents a red appearance, and some quantity of frothy fluid flows from it, its cohesion is diminished, it is easily torn, resembling the spleen, from which the term splenization is derived and applied to this stage. The portion of lung most congested floats in water frequently. This stage of engorgement resembles very much that which follows death in numerous diseases, but may not be confounded with it, if we pay attention to cause, for in pneumonia it is the result of inflammation, in the other it is caused by some mechanical obstruction, and the diagnosis may be ascertained certain by observing whether the engorgement be in some depending part or not, if it is, it is mechanical, if not, it must be inflammatory. We may judge also by the preceding symptoms.

The second stage or that of hepatization, the lung crepitates no longer under pressure, sinks in water, is still red, and the cut surface presents

a mottled or variegated appearance, like a very much like the liver. Some red fluid flows when it is cut, but it is thicker than in the first stage and granular, exhibiting the first commencement of suppuration. The lung in this stage is darker, friable and more easily torn than in the former, it appears swollen by congestion of its vessels by flesh or some of the constituents of the blood, it will collapse when exposed to the air, on account of there being no air contained within the air vesicles of the lungs. This stage has been called Ramollissement-Rouge from its soft and pulpy state.

The third stage is that of purulent infiltration or diffused suppuration, or as it is sometimes called by the French, "Ramollissement-Gris." Abscess following inflammation of the lung is thought by some to occur very frequently, yet it appears from very good authority to be rare. That an abscess will form in the lung, it is true, but it is generally found in conjunction with inflammation of the pleura or pleurisy, and are frequently mistaken for tubercular masses or cavities containing pus, but a circumscribed collection of pus surrounded by hepatized lung

is of very rare occurrence in Pneumonia. (Watson) Gangrene is sometimes the result of Pneumonia but more frequently than it should. It may happen as a primitive disease sometimes, either covering much of the lung or limited to only a small portion. This state is readily recognized by the abominable fetor, hardly permitting a person to enter the room where the unfortunate patient lies. The third stage is readily distinguished from Gangrene for its not being accompanied with this fetor.

Seat of the inflammation, Pneumonia may be either single or double, that is it may occupy either one or both lungs at the same time; though inflamation of both lungs at one time is of very rare occurrence indeed. It may embrace either a part or whole of either lung, or a small portion, or single lobe, and according to some authors it is much more frequently met with on the right than the left side. The lower lobe seems to be more frequently the seat of inflamation than any other part, and appears to be the seat or place of general commencement, from which it spreads to every part of the lung. The bronchia are constantly inflamed -

more or less in this disease, appearing very soon on that side corresponding to the inflamed parenchyma. There is most always some pleurisy, but there may be pneumonia without pleurisy.

Physical signs. The signs of pneumonia are very various, and since they are mostly discoverable by the ear, it would at first seem difficult to understand them sufficiently to diagnose the true stage of disease, but the Rales and Rhonchi are so distinctly marked, that an incorrect diagnosis is seldom made without neglect or ignorance on the part of the examiner.

In the first stage we hear what is termed crepitant rhonchus or minute crepitation, which is compared to the crackling sybilline produced by throwing a grain of salt on burning coals; the noise caused by rumbling a piece of fine parchment; by rolling a lock of hair between the fingers close to the ear; and also, to the gentle murmur made by a breeze among the leaves of a tree. This crepitant rhonchus, though easily recognized, is of much importance and may be heard only over a small part in the beginning of the dis-

-made yet, by it we are unmistakeably informed that there is inflammation of the lung and will lead to disorganization and death unless immediately checked either by nature or art.

At first this minute crepitation may be mistaken for vesicular breathing, but as the disease advances, the crepitation increases until there is no longer a doubt of considerable inflammation. As long as the crepitation does not exceed the vesicular breathing we may conclude that the inflammation is slight, but if it becomes permanent and should ultimately mask the murmur of respiration; it infallibly denotes the progress of the inflammation, and shows that it intends to fall from the first into the second stage. This crackling sound does not remain long in one place, but it gradually ceases until it can no longer be heard. At that time it may resolve, it will either of two things; we may again hear the natural murmur, which denotes resolution of the inflammation, or the crackling sound may cease and either no sound be heard at all or we discover a different morbid sound, which reached

with certainty that the sound is proving wrong and that the lung is now no longer in the 1st stage but in that of hepatization.

The seat of this crepitation is in the minute ramifications of the bronchia and air vesicles.

The opinion of authors is that this sound is produced by the passage of air through liquid, and the formation and bursting of an innumerable quantity of minute air-bubbles. The stage of hepatization is characterized by Bronchial, tubal respiration or bronchial voice. This sound is compared to the whiffing noise produced by blowing through the calibre of a quill. In the healthy lung we do not hear the air lift bubbles through the large bronchia, because it is hidden by the smooth breathing of the vesicular breathing which comes from the thoroughly surrounding the large bronchia. But in this stage it is filled up, the hepatized lung permitting the air to pass through the larger tubes, yet not in the smaller ramifications and air tubes. This then is bronchial breathing, and by applying the ear to the chest and desiring the patient to speak, we hear that peculiar

-liar sound called bronchial voice bronchial vol-
-ume or bronchophony. This is only an increased
resonance of the voice compared to that which we
hear during health. It differs according to the
degree of hepatization, when only a portion of the
is affected; it is merely superficial, and there
may not be dullness and sound perceptible. The
sound is much more marked when the seat of hep-
-atization is considerable and occupies the upper
part of the lung, and therefore, includes the lar-
-ger bronchia. But if the hepatization be com-
-plete, and prevents the chest from expanding,
there will be no bronchophony or bronchial respi-
ration. In this state there is a large dullness
on percussion; without a portion of sound lung
intervenes between the diseased and walls
of the chest, when there will be clearness.
When there is puerile respiration we may conclude
that a portion of the lung is free to admit air and
that hepatization is not general. This is indeed
a period of suspense, there being no sound but
bronchial breathing, we cannot tell whether it
will again resume its former healthy state

or will be succeeded by the third stage or that of purulent infiltration. If the former a slight crepitation will again commence to be distinguishable, especially at the end of each respiration, which gradually increases in intensity, while the bronchial voice and breathing are diminished, in consequence of the lung again becoming pervious to air, until entirely restored. At this point the respiratory murmur again mingles with the minute crepitation, until it supplants it and the lung again resumes its primordial respiration.

Should the same lobe again recur the only difference is, the former hardness, while the latter decreases. If the latter or that of purulent infiltration, death usually terminates the scene. Where is now no certainty in deductation for we cannot say it remained in a state of hepatization or had passed into the third stage. But at last if the structure of the lung is broken down, and a portion expectorated, air finds its way into the vacant cell and gives rise to an gurgling crepitation. But at this stage other signs come to our aid. After

death often the three days pneumonia are found existing in the different parts of the lung, whence often arises the uncertainty of auscultation; for here we may hear crepitation, there bronchial breathing and voice; and we have dulness in percussion; in another place no sound at all, and another place respiration. A failure on the part of auscultation often happens in lobular pneumonia. Such then I believe are the various sounds heard during inflammation of the lung.

A general sketch. Inflamation of the lung is usually marked by shivering, fever & hot and increased frequency of the pulse, and at the same time a stitch or a sharp acute pain in the side commonly, with cough and a dulness of abbreviation. Frequently it is more indistinct in its attacks, stealing as it were, upon the patient, gradually spreading from the air cells to the smaller bronchiae and finally to the air vesicles themselves and interwoven tissues, often unaccompanied by any sharp pain or the common stitch in the side. The cough is at-

first very but is soon attended with a very characteristic kind of sputum.

The most frequent symptoms of pneumonia then are pain, dispnoea, cough, expectoration and fever. The pain is generally most severe in the side complicated with pleurisy, which indeed are the most frequent. Its seat is usually in a level or a little below one or other breast, but it may occupy any part of the thoracic parietes. It is most severe at the beginning, and declines as the crisis declines. It is aggravated by such changes of posture, precaution, full inspiration, or by pressure over the intercostal space.

Andral says, "In all instances where he found the pain and the patient died, the pleura was inflamed, covered with coagulable lymph but where it was absent; he found the lung the seat of inflammation, with the pleura in a sound condition." But when there is no pain, there is always trouble, lightness, weight, heat, or some morbid sensation.

The decubitus of the patient is usually on his back. The breathing is more oppressed when

lying on the sound than affected side.
The dyspnoea is generally according to the degree of inflammation but of this there is much variance, "Carteris parihus" inflammation of the upper lobe causes more pain & dyspnoea than the lower. When there is considerable inflammation there may be but little dulness and vice versa". Sometimes it is so slight that the patient was not aware of it; sometimes to assure that the patient is entirely regardless of everything but respiration, his face becomes pale, he is unable to lie down, can scarcely speak, his nostrils expanded, and in rapid motion, respiration movements very frequent & short; seeming as if the air could not penetrate farther than the primary bronchiae. In such a frame case as these, few patients recover. It frequently happens when the blood is not duly arterialized that delirium sets in, which is truly a very bad symptom. The delirium shows that there is much mischief going on in the chest and that venous blood is having its effect upon the brain. The third symp-

-tum or cough in pneumonia afford but little information; it does not occur in paroxysmal one is, it proportioned to the degree of inflamation; it is dry at first but is accompanied, by sputa, which is transparent, rust colored sputa, uniting in one mass in the vessels and of such viscidity, the vessel may be turned upside down without detaching it; though if it be absent we cannot assert with certainty that there is no pneumonia, but when present it is an almost infallible sign that there is. At first the expectoration is merely mucous, but it soon becomes the characteristic sputa, that is perfectly amalgamated with blood, differing in this respect from Haemoptysis or where it is merely streaked, as in bronchitis. As long as this sputa can be tilted to one side or poured from the vessel in which it is contained, we may presume that the pneumonia is still in its stage, but but when it becomes so viscid and imply that it cannot be detached from the vessel even upside down or even cannot be shaken

from it; we may pretty correctly conclude it had reached the second stage. When it becomes that we not always have dullness on percussion, bronchial breathing and voice. The expectoration which at its access may gradually recede or remain until the end of the disease, though in less quantity, probably owing to the debility of the patient. In the third stage frequently very perfect pulmonic formed. The colour of the sputa darkens entirely upon the third first presenting a yellow, then deeper yellow and finally an intense red. The red mucus indicates pneumonia less surely than the tawny yellow, since it frequently belongs to pulmonary apoplexy. The expectoration is not always a concomitant of this disease, for there may be mucus expectorated, like that in catarrh or even none at all. When gangrene is present the expectoration consists of a greenish, reddish or dirty coloured fluid, with an abominable fetor. These symptoms are all frequently found occurring together at the different parts of the lungs are in its various

stages of inflammation. The duration of pneumonia varies according to the degree of inflamation and may last from five to ten days. The cause is doubtful yet cold seems to be the most frequent.

The prognosis of pneumonia is less favorable in the third degree, than second, and in the second, than the first. Much depends however upon the extent of inflamation, that is, pneumonia of the first degree when it has much extent may be as dangerous as the second degree, when it is more circumscribed.

Inflamation of the upper lobe is more dangerous than that of the lower.

Of the general symptoms the most prognostic sign is the respiration. Considerable dyspnoea being always a very bad sign. If the pulse is feeble and does not develop itself after bleeding, it may consider it unfavorable. Delirium is always dangerous. Thick, viscid sputa denotes intense inflamation, catarrhal mucous. That resolution has taken place, while a watery or plum juice expectoration shows suppuration, and is a very bad sign.

Treatment of Pneumonia.

The treatment of pneumonia, like all other inflamatory affections consists in the rule of venesection, Tartarized Antimony and Mercury. Bleeding is the sheet-anchor. By it we restrain or extinguish the inflamation; by it we lessen the amount of blood in the lungs, and therefore the inflamed organ has less duty to perform; the dyspnoea is diminished, and the effusion of coagulable lymph, by which the cellular tissue may become obliterated, is duly arrested.

This has been the practice for all ages and when one is called to a patient early in this disease, he may according to Dr. Gregory of Edinburgh, dispense with everything after bleeding and water gruel. Bleeding however is not the only good expedient we may employ, though both ancient and modern practice are in favour of its early and free employment. Blood letting & boldness will be effectual. "Caeteris paribus" in proportion.

as it is employed early, that is in the stage of congorgement, before the cellular tissue has become obliterated. In all cases the patient should be bled in an upright position until some marked effect is made upon the system, the pulse becomes softer or if contracted which is frequently the case, fuller, and until the dyspnoea is relieved, or syncope appears to be at hand. Early venesection often gives immediate relief to the pain and difficult breathing, though sometimes the patient may not experience any relief perhaps until an hour or two has elapsed after the operation. One bleeding may often suffice but it can not always be expected. If the relief has not been permanent or complete, the patient must be bled again after four or five hours. Cases are often fatal from the Physician allowing so long a time to intervene between the bleedings It is often necessary to bleed two or three times during the first twenty four hours.

Besides general bleeding from the arm, cupping may be resorted to with much advantage. They should be applied directly to the surface of the chest. They are particularly indicated when there is acute pain and the inflamed part can be discovered by means of auscultation.

The antiphlogistic regimen must be enforced throughout the acute stage and all exertion strictly forbidden. After the second has commenced we cannot expect much from bleeding, yet even here it will lessen the action of the heart and arteries, thereby rendering less action to be performed by that part of the lung which still remains pervious to the air, and tends to prevent any farther extension of the inflamation, together with placing the system in a better condition for the absorption of the coagulable lymph by which the air-tubes and vesicles are obstructed. Venesection is of no more service and rather injurious after it reaches the

patient's strength so much that he is no longer able to expectorate the thick mucous that obstructs the bronchia; When this is the case the expectoration is said to be stopped by the bleeding. At this time Tartarized antimony becomes useful. It is not given to produce emesis, though, the first dose often causes much sickness and even vomiting, yet it is afterward usually tolerated and produces as much effect upon the disease as when it causes the nausea and vomiting. If however it should continue to vomit and purge much, a few drops of Laudanum may be added, with advantage. The following was Dr Thomas Daniel's plan of administering Tartar Emetic. After free bleeding he begins with ℈ss of ayrmin of Tart-anti, in a half wine glass full of water, with a few drops of Laudanum or Syrup of Rhubarb. Two doses of this strength he gives at an interval of one

hour from each other. If the patient does not vomit, omit the opium, if he does, continue it doubling however the tart. anti. for the succeeding two hours and in this way he continues it, adding 1/3 of a grain of Antimony every two hours until two grs. are taken every hour.

This last quantity has never exceeded and says, that he has continued it in this dose for several days without observing any ill consequences to follow.

Under this treatment the symptoms will undergo a change for the better in two or three hours, though relief may not be obtained for twenty four or thirty six hours.

According to the best authority tart. anti. always acts best when it does not produce any effect upon the inflammation itself, that is, when it does not produce vomiting, purging or any depression of the vital powers of the system. This appears very important

to know, for many think that it un-
-acceptably beneficially, when it produces
these prolonged and severe symp-
-toms. After the dyspnoea has been
signally relieved, the Tart: Anti: may be
omitted, but if there should be any
signs of the inflamation rekindling
it should be recommenced immed-
-iately. After the inflamation has
advanced to the second stage Mercu-
-ry will be of more value than Antimo-
-ny. It should be given so as to make
the gums tender, and this effect should
be produced as speedily as possible.
The grain of Calomel every hour or two
grains every two hours combined with
a sufficient quantity of Laudanum
or Syrup of Poppies, to prevent it from
running off from the bowels, seems
to be a very certain way to accomplish
the object speedily. If the bowels be-
-come irritable from this, some other
preparation of Mercury may be employed

such as Massa Hydrargyrum or the Hydr-Cum Creta. If the mercury given internally should be contraindicated or appear slow in accomplishing its specific effect upon the system, the Linimentum Hydrargyri may be rubbed in upon the surface or the mercurial ointment.

Mercury acts beneficially in this disease, by arresting the effusion of coagulable lymph and causing its absorption. After the lung has become hepatized, we must be guided in our treatment by the general symptoms. If the pulse be steady and firm, wait the effect of the mercury. If however there should be sunken features, pallid face; coldness of extremities; a tendency to delirium; a feeble pulse, or anything that marks the yielding of the vital powers and death by asthenia; cordials and stimulants should be given

such as, Carbonate of Ammonia, Wine Senega &c. Feed your patient upon milk and beef tea.

Blistering is another means of much importance used in pneumonia. At first they seem to aggravate the symptoms by adding to the irritation and distress of the patient. They are also in the way when we wish to expand the chest by means of auscultation. But as we find the fever & pain subsided, the skin moist, the expectoration still difficult, we press a pendent blister, a piece of leather, or a piece of skin over the ribs, a large blister is of essential advantage. It should always be applied to the lower part of the chest, and not to any more part of the lungs.

Depletion is of less value in the treatment of this disease than in most of the other inflammatory affections, but it is sometimes of the first importance in the beginning of the disease, but generally speaking

=gration obtained once every day. Convales-
-cence in this disease is generally rapid,
much more so than could be expected
a priori, after frequent and large bleedings.
A patient however should not be pronounced
well so long as there remains any prosti-
-lation.

In taking leave of the history and treat-
ment of phrenitis, let me beg, that the hon-
-oured and learned faculty will excuse
any defect in my composition. &c.

Feeling my utter inability to lay before
you a dissertation upon any subject that
could be worthy of your perusal, or reflect credit
upon myself, I must here entreat you to be-
-lieve, that what I have done was with no
other feeling, than an ardent desire to
learn anything and everything that will
conduce to my future success and happi-
-ness as a Physician —

An
Inaugural Dissertation,
on
Syphilis.

Respectfully submitted to the
Consideration of the
Provost, Regents, & Faculty
of
Physic, of the
University of Maryland
for the Degree of
Doctor of Medicine
by
Peter. J. McGary
of Virginia.

Syphilis.

The origin of Syphilis is still a matter of doubt and dispute; some saying that the crew of the distinguished Columbus, who towards the end of the fifteenth century discovered the new world, brought it from America to Europe; some that it existed in Italy France and Poland previous to his arrival, while Matern Perlin a Bavarian, in his history of the Italian Expedition of Charles the eighth, says it was inflicted upon the Monarch and his army by the especial hand of God as a punishment for having carried off the Duchess wife of Villanne from her betrothed lover. There are others who ascribe to it a more ancient origin, and say it existed before the coming of our Saviour, about the time of Moses. If this however we will not dispute, its place of origin may

remain in obscurity; its past history we will not stroke to unravel, of its recent cause we are well acquainted, and of its present existence I am sorrow to say we have many living, walking monuments.

During the first years of its prevalence it was much more speedy and violent in its progress, and more fatal in its effects, than it is now; then, it was called a Plague, was attended with extensive Buboes and Abscesses, and often followed by death; or if recovered from leaving marks of its ravages on its unfortunate victims. In some places the unhappy afflicted were denied medical assistance, left to their own best and licentiousness; and one edict from the Council of Edinburgh banished from their Home, their Family, and their Friends, both those who had the disease and those attempting to cure it. Many changes in the state of affairs

have taken place since then; the disease is more mild and more tractable; and though it is certainly one of the most serious evils entailed upon Man, and one that is a just punishment for His licentiousness, yet it is a very common affection, and if we cannot say it is a "Fashionable" disease, we can at least assert that many of the Fashionables have it.

It is produced by impure connexion, and by inoculation of the unclean poison, and may occur on any part of the body though it is generally confined to the organs of Generation, as those are the parts most exposed to the venereal virus. The first sign that inoculation has taken place is the appearance of a small rose or "Chancre" on the Penis; this "Chancre" may be preceded by some itching and irritation of

the glands, and occurs usually from three or four days, or several weeks after exposure to the contagious principle, it is characterized by a small, acuminate pimple with a hardened base, inflamed edges a little prominent, and secreting a yellowish white or yellowish green fluid.

Lawrence records five kinds of Chancre, first, the simple venereal sore with a simple elevation; second, one in which the margin of the sore is a little elevated and indurated; third, the indurated or Hunterian Chancre, in which the margin of the sore, and its base present an unnatural hardness; fourth, the Phagedenic venereal sore, where there is ulceration accompanied by the destruction of the part with a copious discharge; and fifth, the sloughing or sanguineous Chancre, where there is a loss of vitality, the sore becomes dark and black, and the part affected

are destroyed by that juice; consequently
slow-time gangrene.

John Hunter taught, and it was
for a long time believed, that the matter
secreted by Gonorrhoea and Chancre, was
of the same kind; this is known now
not to be a fact; various experiments were
made with the view of each and they
have been proved to be essentially different,
to proceed from a different kind of poison,
require different kinds of treatment; one to
be of much greater virulence than the
other, and both able to exist distinctly
at the same time. Ricord states that
Chancre itself produces a specific pus
which pus and which only reproduces
a Chancre; it does not produce it in
normal person at all times and in all its
stages, but remains only in its mild
of gangrene, or slain two of its ulcera
tion. It may be produced on any part

of the body and in it as far as accessible, and the pus from a chancre located on the finger, the leg or tongue, will when applied to a fit part produce the identical disease,

Besides the Chancre we have another local symptom of the first stage, viz a Bubo, which Dr Hewitt says is nothing more than an internal chancre, caused by the absorption of the venereal poison, appearing in the groin, most commonly the glands of that part are affected by a slight swelling; as this swelling increases the skin reddens, the pain is severe, suppuration ensues, when bursting naturally, or when being opened a orifice discharge of virulent pus is poured out. This Bubo may become of some size, its pus may burrow to some extent, making it difficult to cure at the same time giving the Patient much

pain and rendering him scarcely able to walk, Ricord has distinguished seven kinds of Bubo, all of which it will not be necessary to name, suffice it to say that he has proved most effectually by observation and experiment that virulent Buboes are preceded and caused by a chancre, are analogous to that in their nature, differ only in their seat and the matter of both is equally inoculable, After the local symptoms I have mentioned have been continued for a considerable time, say from two to four months, the constitutional symptoms begin to manifest themselves. The mucous membrane of the throat becomes inflamed, the tonsils and uvula swollen, and ulcers often appear upon them, The Bod. of the Patient becomes covered with blotches of a copper colored redness which are usually called Syphilitic Roseola.

-asis, a matter sometimes exudes from them, but unlike that from Chancre and Bubo it is not contagious and inoculable. This is the scaly eruption, there is also the pustular eruption proceeding to ulceration, and the papular eruption or mucous Papules, Syphilitic Warts, which occur generally on the mucous membrane near the Anus. It has been said that the matter from secondary Syphilis is not contagious or inoculable; this however is not admitted by all; we have the testimony of Hunter and Ricord in regard to this fact, the former says that as the pus from a Chancre produces a Bubo, why do we not have a Bubo from the absorption of the matter of a Rocky-bone? for example, we often see Patients with venereal ulcers in the throat and on the arms, yet we have no Buboes in the glands of the neck and axilla;

apply however the virus of a chancre to the arm and leg and we will soon have swellings in the glands of those parts. In regard to this matter Ricord says, all secondary phenomena are far from being specific, and that the syphilitic virus is modified by venous absorption and loses the property of inoculating, while it may be propagated by inheritance, and that a consumptive circulatory must be the product of direct contagion, and not the result of general infection. If these be facts, as undoubtedly they are, the belief that genuine Syphilis can be caught by kissing, suckling, or sleeping with Persons having only Constitutional Pox is incorrect. Consequently we conclude with Ricord, that no pus except the pus of a Chancre can produce Syphilis, and a lancet charged with this pus taken at a proper time, and applied to any part of the body, reduces

all to perfect equality.

The bones often become affected, pains are felt in the limbs at night, nodes are formed on the bones which sometimes become carious, and we have all the symptoms of Syphilitic Diseases. The three secondary stages have been mentioned, it will be well to mention, that we have the symptoms modified and aggravated by various causes; these modifications are produced by the age of the Patient, peculiarity of his Constitution, his previous habits, & his mode of living, rather than by any difference in the intensity of the Syphilitic Poison. Cheloius states, that the stronger and more powerful the Person is, so much the more speedy in its course and destructive is the Syphilis. Climate has some effect, those living in warm Climates do not suffer so much as those living in cold ones.

Diagnosis. The diagnosis of primary Syphilis or Chancre is by no means an easy matter, for often many sores presenting the same external appearance, occur on the genital organs without being syphilitic. In Women who have Gonorrhoea, sores sometimes appear on their genitals from a want of cleanliness; be also in man in consequence of irritation about those parts. Consequently a sore following a suspicious connection, the color and consistence of Chancre, and located on the genitals, is not necessarily the effects of Syphilitic virus, nor have we any efficient and absolute proof of the existence of the sore, except by the pus which it secretes, which is inoculable, and the citation of the system which follows its application. There existed in the time of Abernethy a disease so similar to Syphilis, that he remarked, there was

no observation however acute, to decide upon its nature; and the fact he generally depended upon in making his diagnosis, was that the constitutional effects of Syphilis are progressive, and never disappear unless medicine be employed. Carmichael founded his diagnosis upon the eruption which followed the syphilitic sore. Notwithstanding this difficulty of diagnosis, we can generally tell, by enquiring particularly into the history of the case, observing the callous edge, the tint of the margin of the Chancre, and other signs given; at all events if a mistake must be made, make it on the safe side, commence proper treatment as soon as we have good reason to expect Syphilis exists.

The Prognosis of the disease depends upon its complications, and manner of treatment; if seen in the first stage, uncomplicated with any other affection

and treated properly, the result is most always favorable. If however the disease is permitted to run on, if the patient is intemperate in his habits and suffers from any other lesion, a fatal result will probably ensue. Primary is more easily cured than secondary, and secondary than tertiary.

Treatment. In the treatment of the simple primary sore, or Chancre, it is now customary if seen in time to use the abortive method, viz, either to burn or snip it out. This may prove effectual if it is done soon, for during the first few days the Chancre is only a local disease, the virus has not been absorbed in the system, and we may by the application of Nitrate of Silver, or Caustic Potassa, or by the use of the knife destroy it and its injurious consequences. This is objected by some, but it is certainly as

ingenious and philosophic as that custom of extirpating the part wounded by the bite of a Rattlesnake, or a Mad Dog; they are all poisons. Rivard says it should be destroyed before the fifth day of its existence (counting from time of contagious contact) or truly dead and produces no consecutive accidents. If however this treatment has not been used, if the diseased person is not seen until it is too late to extirpate the disease, then we must resort to proper treatment to prevent the general venereal disease. And here we have great cause to thank the Almighty hand that inflicted upon man, this punishment for the gratification of his libidinous desires, that He has also given Him a medicine which if properly taken, will subdue the increasing power of the disease, stop its baneful march through His system and restore to Him, His health and happiness.

That great Medicine, that the Magistri omnium remedium, is Mercury.
It is in this disease the Chief in our hands, the Friend to alleviating affliction be gone, the great Specific against the constitutional Effects of this terrible, this youth destroying malady. If we have a simple or indurated Chancre it is necessary to give Mercury until the system is brought decended under its influence. The method much used is to give the Blue Pill in five grain doses three times daily, until we have evidences of its constitutional effects upon the system, Moderate Ptyalism shows this; of course it is not necessary to produce ptyalism, but as it may be necessary to continue the Mercury until after the sore is healed, salivation may be induced. At the same time the Patient must be kept perfectly quiet the parts affected should be kept clean the diet

moderate and sustained dose, and no alcoholic liquors drank. After the Mercury has produced its acquired effects, the Iodide of Potash is commenced, administered, & thus eliminates the Mercury from the system and prevents any serious effects it might occasionally produce. Mercury acts on the blood and formative tissue in these cases, its action should be kept up for one or two weeks, as we wish not only to cure the primary symptoms, but to prevent the secondary. Mercury has been so successful in the cure of the Hunterian Chancre, that Ricord asserts the difficulty of curing one by ordinary means, and the good effects of Mercurials, are the principal arguments which cause that Chancre, to be considered the sole type of primary Syphilis, and Mercurials the only the cure as opposed to it.

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Hunter, himself, was so firm in the infallibility of the use of Mercury, that one of his pathognomonic signs of the disease was that it could be cured by mercury alone. This remedy however is not applicable to all kinds of Chancre; it is not used in the varieties denominated Phagadenic or Gangrenous. In the former kind we may use tonics, good diet and cleanliness; in the latter mortification, acids and antimonials; here also we may touch over the sore with pure Nitric acid, this will arrest the progress of the disease, a line of demarcation will be formed between the healthy and diseased tissue, and the latter easily removed; then emollient poultices may be of much avail.

Ricord states that pulmonary is not virulent, as you never meet with the disease, consequently there is no occasion to use mercury, as we will have no secondary

symptoms; the system needs confining, better than debilitating or irritating remedial agents; avoid local applications to the chancre, or may use the Bichloride wash, 1 grain to the ounce of water, or dust it over with Calomel. Be sure at all events to keep the ulcer as clean as possible, and prevent the irritating effects of the urine.

When Bubos appear in the groin, the first question in regard to them is; do they proceed from a chancre, or are they sympathetic of some other inflammation; that is; are they virulent, or not? An abortive treatment proposed in the end has been somewhat used, not with such remarkable effect however, as virulent Bubos will generally suppurate. The method consists in applying a blister to the Bubo, after that has effected its purpose, it is removed, the skin taken.

off, and a solution of Corrosive sublimate, twenty grains to the ounce of water, is applied to the part by a Camel's hair pencil, & linen moistened in it is strapped over the Bubo. Permitting this to remain, two or three hours by which time it has formed an Eschar, it is removed, and the Bubo covered by an opiate cataplasm for the first day, and after that cold compresses should be used until the Eschar falls off, when healed dressings are then appropriate. If however the above method be not employed, then we must be directed in our treatment of the Bubo; when inflammation general and local depletion is useful, blisters, Emplastrum vesic. and Iodine. Suppuration is the most usual termination of these Bubores, and the best thing is to promote it as soon as possible; as soon as we are assured pus is present, discharge it by opening the Bubo, and abstaining emollient

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poultices. This abscess may then take on healthy action, and fill up from the bottom; sometimes the pus will burrow in the tissues around, and the whole sore takes on a phagedenic character, in this case the application of fuming nitric acid will arrest the extension of the abscess, and healthy granulations will soon be formed.

In the treatment of Secondary Syphilis Mercury has for a long time had, and still enjoys the high prerogative of predominance. It was stated that persons who were brought fully under the influence of Mercury in primary Syphilis, did not generally have the secondary symptoms. When they do occur however give Mercury, and use some astringent wash to the pustules. Salivation must not be induced in this, in fact in any form of the disease, in its full effects; we must watch its precursory symptoms and diminish the dose, besides

stop for a time the irritation entirely. Mercurial frictions have been used by some and will prove very efficient where the Patient cannot take the mercury internally.

The Tertiary symptoms, or syphilitic nodes, require a full mercurial course, for their entire cure and removal, here the Iodide of Potash is of immense importance and under its employment these nodes disappear in a short time, though some assert the cure is not so permanent as that produced by mercurials.

Notwithstanding Mercury has been so successfull in the treatment of all the stages of Syphilis, and has been endorsed and strongly recommended by the most eminent Physicians of our age and country, yet there are some pretending philanthropists who not only do not employ it, but shower down upon it and its commendors the vilest reproach and abuse

and would wish to hold them personally responsible for the train of evils which often follow the pills and which they charge to the employment of Mercurials. In some Medical Journals, in every Newspaper of this County we read astonishing accounts of the cure of Syphilis without Mercury, from Hance and Swan with their "Sarsaparilla cure," to Johnson with his "Lock Hospital and "only efficacious remedies," or to Mecaunin's "Lucina Cordial, or Elixir of Love," all, all unite in blasting and venifying the greatest Remedy God has ever bestowed upon man, and proclaim to the world through their pills advertisements that the success of the present day and humanize the human race to a more natural grade, I would tell them to look at the records of internal Hospitals, to observe how frequent secondary symptoms follow the use of non mercurials, to see

the direful, dreadful effects of Constitutional Syphilis, and to remember that as they have ~~been~~ delayed with the disease, so we may blame them permitting man to be cut off in the blossom of their sins, and sending them unprepared and unannounced to the throne of their God.

Besides these offensive Quacks, we have some Eminent men who advocate the curing of Syphilis without Mercury; they use the strictly antiphlogistic plan. No one doubts but they may succeed in some cases, they may cure the local disease, but when cured (as the inquiry will it not appear again? will not the secondary syphilis be more likely to return than when treated on Mercurial? Certainly it will; observation, experiment, and the report of many Hospitals come to prove these facts. Where is there a Professor of Surgery who recommends

the non Mercurials solely?

Our very worthy and able Professor Nathan R. Smith, has never Mercurialized in Syphilis during an extensive practice of twenty eight years in this City, and has never seen a case in which he regretted its use, Facts like these prove more than all the fabrications of Newspaper publications, and cause us to accede to Mercury in Syphilis, the title of Benefactor of Mankind.

P. P. McGary

of Berkeley Co.
Va.

An
Inaugural Dissertation
on the
Predisposing Causes of Disease
Submitted to the Examination
of the
Provost Regents & Faculty
of the
University of Maryland
for the
Degree of Doctor of Medicine

By Lewis L Pollock
of South Carolina

In surveying the wide and widening field of medical science in search of a subject for a graduating thesis we feel utterly at a loss, so many and so various are the subjects so fruitful in thought and interest

In its comprehension either directly or indirectly it embraces organic nature in all its extent a term which in itself to the human mind is almost a synonym for infinitude

Its investigations extend from the minute monad which perishes within the hour of its birth through all the gradations of organic life up to man's creation's master, nice the incomparable Chef d'œuvre whose existence is not for time alone but through the unending cycles of eternity

Especially does it pertain to his highest temporal interest his health and physical well being attending him from the minute germinal spit. in the vale of Baer down to the last and saddest scene of all when he yields to that stern and inevitable necessity of his nature "death". And if such be its end how deep a hold should it take on our attention how sedulously should we pursue its investigations how carefully study and apply its great truths. how zealously guard its honor and sift out the drops of ignorance and error how resolutely protect it from the contaminations of impostors, and how dear to every lover of his race should be its cultivation and advancement. "and we may add how weighty the responsibility which attaches to him, who assumes to know its great truths and principles, and essays to do its benign and holy offices

A science which in the earlier ages of the

World's history deified in the estimation of mankind its votaries, which in all ages has claimed admiration and respect, which has enlisted in its prosecution some of the noblest intellects of earth, suns as it were whose beams millennium like, have lighted up the dark vales of bigotry ignorance and superstition, through which the unchrisled generation of men had too long and too often trod. What a noble field for the energies of a lofty and high souled ambition. Next to the duties we owe to heaven and what duty higher than the amelioration of his condition here and the alleviation of his suffering. What higher position than to stand like the angel of deliverance and bid the aching frame and bruised spirit be whole again to be the mediator between man and his last great enemy were surely honor enough for any of mortality's frail children. Instead of considering a special

disease or function or structure we have concluded to review some of the predisposing causes and finally what is a cause. it may be defined that which precedes an produces an effect. Causes of disease may be intrinsic or within the organism and independent of external agents. or they may be Extrinsic and dependent on numberlesp circumstances the relation however between cause and effect in the production of disease is not so simple and regular as this relation under other circumstances. The influences which affect the animal economy are so infinite and various as to produce incessant change. although there is a protection against external depreciating agents. vascular activity of a part lays it extremely liable to inflammation &c. &c.

"Various diseases seem to leave behind them a tendency to recur in this class are malignant constitutional and convulsive nervous.

disorders, gout, rheumatism and paral.
certain diseases existing in the body either
latent or developed often act as a predisposing
causes affections of the heart inducing
congestions and obstructions to the circulation
diseases of secreting organs by failing to act or
doing so imperfectly. Malarial or other infec
tions may be retained which otherwise might
have passed out of the system without bad
effects. Temperament often exercises a determ-
ining effect on diseases. Temperament may be
defined to be the activity of a peculiar function
or set of functions
Four Temperaments are usually described the
nervous, which probably consists in an undue
development of the nervous system, compared
with the other systems, predisposing to the various
nervous disorders Epilepsy Chorea, Spasms,
are generally manifest by what is known as
nervousness or great agitation about trifles

"the Sanguin which consist in great activity in the arterial and venous circulation its subjects are generally full, red and plethoric with full pulse and are liable to the inflammatory diseases and hemmorhages the bilious which is manifest by dark hair swarthy compl sion and disposition inclined to moroseness; in these indinduals there is a liability to gastric and hepatic disorders or of some organ beneath or behind the cartilages of the ribs and hence the term "Hypochondriacal" as applied to these subjects. "The lymphatic is attended by pallid complexion feeble circulation lip of tone in the organic actions, dropsies and kindred affections are the diseases of this temperament."
Occupation exerts an influence in diseases the bad offections are a well known clap. particular postures as of Tailors and Shoe makers to stomach derangements, determination of blood to the head in the case of Engravers and,

match makes occupations which cause, for great section of organs of sight &c &c. In the different sexes there is of course a difference in the diseases of the generative apparatus but sex also modifies the diseases of other systems.
In man, the bony frame work is larger, the voluntary muscular system greatly developed, and the animal instinct and passions too often overrule the gentler promptings of his nature, notwithstanding in him that attribute which makes him most like to his God, towers to its greatest earthly perfection.
These developments induce the diseases which naturally belong to them, these, namely of muscles and joints functional and structural, lesions of the brain also and the manifold disorders which result from nations opposite and unrestrained passion of itself produced disease in the latter an unapeased suffering cause has done the same, observers and pathologists have

long been aware of a certain principle or force, resident in the animal economy, capable in a measure of resisting the influence of noxious agents and disturbing causes. Van Helmont, named it Archæus, it is the anima of Stahl & Cullens, vis medicatrix Naturæ its exterior materiality cannot be described like the soul, it is an essence the vital force life principle life the breath of deity the manifestation of that power, which holds us sleeping, or waking in the hollow of his hand. This principle like a faithful sentinel is ever at its post, watchful at every point, and though at last it may succumb, and the citadel be sacked unlimely, We are rather to look for the cause in the frailal sensibilities of our nature and the frequent degradations to which our bodies are submitted. A predisposing, or determining, cause of disease is a circumstance or series of circumstances which so impairs either functions

or structures or both as to render them liable to disease they may induce debility or deficiency of power, or excitability. Actual disease or the condition in which it leaves the system, congenital or inherited tendencies those dependent on occupation temperament sex and age, all may be enumerated among the most common predisposing causes. And first we will treat of inherited predispositions. Certain diseases are transmissible from parent to offspring, such as blindness deafness, epilepsy, mania asthma gout rheumatism and the tuberculous diseases. This influence is imposed on the form the joint product of the sexual influences of the parents.

The fact that diseases are transmissible thus, is as clearly demonstrative as the peculiarities of feature and mental characteristics, this predisposition which descends with the germ, may remain latent and undeveloped through

a long life unless brought under the influence of some exciting cause, or it may perish in its inception or during the embryotic or fœtal state. Sometimes a generation may pass unscathed while the following may be attacked with the diseases of the grand parents. it has been observed that the tendencies to diseases of the females are more readily transmissable than those of the male. Debilitating causes of disease are numerous, their primary action are depending to the animal or muscular nervous systems, and secondarily on the organic system, especially the heart and arteries. Prominent among these causes is previous disease especially the low fevers and long continued inflammations convalescence is well known to be an exceedingly delicate almost perilous state of the system & the whole economy has been convulsed the tone and force of the organic actions

has been impaired the harmony of the
lus great Systems has been disturbed
then unity of action is destroyed (and strength
which is a necessary result is weakened, the
alone impressibility of the nervous system
in these cases lays the system liable to
attacks from various sources, Great
losses of blood or the secreted fluids the
debilitating effects in this case is obvious
an anemic or cachetic state is induced,
which offers an easy prey to the various
influences with which we are surrounded
Hemmorhages fluxes, dropsies and the vari
ous uterine (and vaginal secretions when
in excess drain the springs of life and place,
them below the point of existance,
The loss of no secretion exerts so depressing
an influence on mind and body as of the
semen, it is said there is a tribe where
live only till they copulate, (and then) die

their mission being done;" and the horrid train of symptoms we see in the human system from excessive venery is an evidence that that which destroyed the mean tribes can greatly impair (and ultimately) destroy that framework in which the deity stamped his own image in spite to of the reason, with which he endowed him

The imbecile mind the shattered frame (and shuffling gait of the young, premature of old is evidence enough of adams ignominious fall.

Intemperance in drinking by weakening and wearing out the excitability of the brain and nervous system, by establishing, slow, inflammation in the stomach liver (and kidneys (and by its incipient disturbance of the Heart and circulation prostrates the system (and weakens exciting powers, and in addition to establishing disease itself

lay the foundation for various disorders which sooner or later, loosen the thread, if life lightly spent (and ignominiously ended. Cold in excess is a powerful sedative the reaction which results from its judicious application is healthful (and invigorating but if pushed to extremes, makes the capillary circulation of the surface causes retrogression of the blood (and fluids produces congestion of the great organs and greatly reduces the force of the system thus paving an easy way for the inset of malignant typhoid and decaying diseases no cause except perhaps hereditary ones is more in the production of consumption that most terrible of diseases terrible to the uneducated for all they know of it is the hollow cough the sleepless night, the wasted form, (and the funeral, lirlegs, and terrible

to the educated physician yet, there too he full well knows and feels beside that pen his art is powerless to save (and can at best but smooth the path the doomed traveller must surely tread,

An instance lately reported is strikingly illustrative of the effect of cold in producing disease. A navigator from the regions of the Esquimaux Indians reports that the winter of 1833 & 4 - in that latitude was the coldest which had been felt for forty seven years, (and in addition that the Seal Catching (and other fisheries in which that people are dependent for subsistence had failed (and fallen far short of the usual supply that they had suffered severely for food and from the intense cold and that Phthisis during the last summer, was destroying them in great numbers almost to decimation

Here in conjunction with the external cold was a failure of the supply of heat from within from their oils and fats they failed to receive a sufficiency of Hydrogen and Carbon for oxidation in order to maintain their definite temperature of the warm blooded, 100° Fahr hence their powers of life succumbed before the breath of the pestilence and their nature is fast wasting away Heat is not less powerful in the predisposition which it exerts towards disease under its effects fibre relaxes, the watery portions of the blood escape through the sweat glands the blood is thus rendered more stimulating (and such congestions and bowel diseases prevail at the close of the hot seasons in the tropics, moisture greatly decreases the debilitating effects of heat.
Mental and bodily action when

carried to excess exhausts the nervous system, sedatility diminishes tone and strength, organic life and the circulation suffer "the system brought to a state bending on disease (and easily amenable to exciting causes. The pale faced student whom the demon ambition is goading on to incessant toil for the evanescent honors of earth, too often finds his fond dreams blasted in a broken constitution (and his troubles ended in the kindly grave.

A sedentary life is a well known cause of disease "here too the muscular nervous system (and circulation are the first to suffer. the sluggishness of the latter, overloading the internal organs (and failing to reach the extremities oxygenation of the blood is imperfectly performed the liver is overwrought,

and various cardiac, gastric, hepatic and other derangement follow. The effect of impure (and vitiated) air is obvious in the pale (and) bloodless cheek, (and) languid form of the Inhabitants of filthy (and crowded) avenues compared with the ruddy flush of health, as it mantles on the cheek of the blooming country lass, or the sinewy limbs of the, the forest peasant.

Imperfect nutrition may result from failure of the digestive function or in the quantity or quality of food under this state of affairs low forms of disease are invited the system succumbs more easily to cold (and) contagious (and) infectious diseases are rendered easy of propagation. Anxiety, despair grief (and) fear, are conditions of mind which render the body an easy-

prey to disease under their influence the Vis Vitae is impaired the nervous System is excited (and impressible (and general diseases Contagious (and Epidemics then make sad havoc in a panic stricken community.

States of excitability (and organic activity predispose to disease also. In this condition there is marked susceptibility to miasmata (and modifications. Cullen and writers who had preceded him divided causes into proximate and remote, but a more recent and rational classification is that of predisposing and Exciting causes. In the production of disease it is necessary that these should act conjointly or that one or the other should be in a state of powerful activity "As an instance two persons are exposed, to cold one may get a Coryza, the other a diarrhoea here

cold was the exciting cause (and the predisposition of each determined the particular effect, the cold would have. Again a weak stomach will cause dyspepsia (and indigestible food will do the same, in the former a predisposing cause has acted, whilst in the latter, it is an exciting cause which produced the effect. "In woman, the involuntary system of muscles, the nutrient (and above all, the sensitive functions predominate, "while her mental characteristics are acute perception (and, the instinctive) moral feelings.
She is everything to make her," Heavens, last best gift to man, "without her earth, man a howling wilderness. her influence is christianizing "around her, character, there is a touching charm, of moral, beauty, worth more than all the Sermons

was altered. She is liable in her pathological tendencies to great changes in flesh, to convulsive affections of the nerves of the spinal system, and to various pulmonary affections from the extreme irritability of her sensitive system. "The last of the predisposing causes we propose to notice is age. The internal changes of growth and development as well as the varying external circumstances which surround us, at different periods of existence exercise a determining effect on disease" "In the earlier months of extra uterine life the heat generating functions are deficient and cold and its train of affections is likely to assail the body. The oxygen of the air is the cause of the redness of the surface at this time of life and induces cutaneous disorders.

The astonished young one finds ample material for the exercise of its eyes (and brain in the new condition of things which surround it (and this functional activity causes rapid growth with tendencies to hydrocephalic (and convulsions Dentition is the source of numerous irritations to the yet immature nervous system as well as being productive of bowel (and gastric disorders
In childhood growth is the predominant function (and hence digestive disorders, the fibrin is in excess in in the blood (and, the plastic inflammations croup, etc are frequent at this age. Puberty is a critical era for, both sexes new desires are awakened, new functions developed, and new, susceptibilities brought into action, & alteration of functions is the pathological characteristic of this age; congestions (and,

inflammations are liable and hereditary tendencies are apt to manifest themselves at this period. Especially peculiar to this age female, is this age, and its accidents may depend her happening or missing for life. The inauguration of the menstrual period and its close are well named, "critical" during the child bearing or menstrual life woman is predisposed to all the functional affections before spoken of under the head of Sex. At the period of at which the System attains its maturity of strength and vigour predisposing causes are less active the power of resistance greater (and Celsus says) is the season of greatest health.

From this time till the feebleness of old age begins to creep on, predisposing causes as far as age is concerned, continue to remain comparatively inactive (unless

the grade of health is more uniform
Languor of circulation is the first effect
of the infirmity of increasing age. (and,
shortly thereafter, the body begins plainly
to evince that this tenement of the soul,
is but a perishable one 'that infinite
wisdom has assigned a limit to our
probation here. The balance, between
the arterial (and venous) system is
destroyed diseases of the great organic
apparatus the alimentary" the respiratory
"and the secreting are induced (and under
this failure of vegetative life the nervous
system gradually sinks the timely rotundi-
ty of youth, is replaced by the absorption
of the fat. (and the shrinking of the
muscles, or else an unpaid obesity is
produced the early proportions of the
bones, structure, increases the form ance,
cast and agonies is bruised and decreased

the pact is close and polished the special senses are impaired reason slips from the helm moorings and he, who had enchained listening senates degenerates to a dwelling idiot. An infinitude of diseases render this condition may abruptly carry him off, or he may linger on shut out from the activities of life the circle of his desires and pleasures abridged the number of his duties few and simple (and with a world of wrecked hopes behind him he sits calmly waiting the summons when the "Silver cord" shall be gently loosed and the golden bowl shall " crumble to its original dust.

Very Respectfully
Louis L. Pollock.

An
Inaugural Dissertation
On
"Chorea Sancti Viti"
Submitted to the Examination
Of the
Provost, Regents and Faculty
Of the
University of Maryland,
for
The Degree
Of
Doctor of Medicine,
By
A. A. Stonebraker
Of
Washington County,
Maryland.
January 22nd 1856.

Dedication.

To my former preceptor.
Dr. W. H. Grimes.
In admiration of his judgment & skill in medicine,
And
In grateful acknowledgement of early kindness,
And to
Prof. N. R. Smith, M. D.
As
A mark of respect,
For
His attainments and skill in Surgery;
For
His position, from age and service,
At
The head of the Surgical profession in the United States;
And for
His many excellent precepts;
This humble effort
Is respectfully inscribed,
By
His pupil,
The Author.

Man, the great centre of God's creation, stands and looks down, independent as it were of all things else, both of the animate, and inanimate in it.
Though he may be clothed with the tattered garments of poverty; though he may be confined within the gloomy walls of a dungeon; though he may be bound down by the galling chains of slavery, yet his creative power will continue the same, unchanged, powerful. He may make no show in the public walks of life, yet his thoughts may be clear, his affections pure, his acts resolute and virtuous; he may have a superior dignity, far higher than accumulations of brick and granite, however cunningly put together, or though stretching far beyond our sight.

There is a power in man which cannot stop at mere impulse within the bounds of

space and time, which seeks for the infinite, uncreated cause, which cannot ~~rest~~ until it ascends to the eternal all-comprehending mind. The grandeur of the principle, and the importance of its existence cannot be exaggerated by human language; it marks out a being destined for higher communion than with the visible universe, developes within us the true idea of God, moves us to adore him, to aspire after his likeness, the noblest growth in human nature, I may justly add, in celestial nature. "Mind sits the general of creation". Her regal brow is, and golden wreath, but tell us that wreath is neither her birth-place, nor her proper home.

Man rises and angles and out of the natural relations of human beings, as established by the Creator, and spiritual prior to any positive precept; they arise not from the material world, which awaken

her from the deep sleep. All generations and ages embraced the royal theme of mind; all perpetuations, principles and employments, there congregate.
The product of ancient Rome and Greece, and that of young America lay at our hands.
The question may be asked, what to mankind, this young man, what is it? It may be answered in the language of another: An imperishable mind. It commenced at the beginning; it touches the middle, and the end of time. It is a vast wave rolling down the tide of time, ever rolling, ever descending. Its spray and foam are lost in the sands, or mellow in the air, as fragments of its mortality are withering, and are entombed up in the grave; but the spirit continues unbroken; the wave still onward, onward forever; profitable and

that has to be [illegible] up, till the last trump shall sound, till the last end be come".

Man, woman is included in that imperishable saint. The idea of humanity lives not in man, nor in woman, separately taken, but in both. The species is indissolubly one. Should they be separate, man would be no longer man, but merely the half of man. The rights of the Almighty cannot be destroyed. "In that day in which He created them, He called their name Adam, that is to say men". They are indissolubly linked together, and the perfection of manhood, is found only in the union of the two. To dream of woman, therefore, as an equal, does her equals wrong. Let any people treat her as such, and they must soon or late degenerate into barbarism. Can her rights be invaded, and not

the rights of all at the same time? Can she suffer, and man not feel the pain? Can she be degraded from the lofty position which Heaven designed her to fill, without that degradation touching, and tainting, the whole body of society? A simple glance at the miserable condition of the Oriental nations, who shut her up like a captive bird, within the guarded precincts of the Zenana, or harem, is answer enough. It may be asked, what new gift we offer? or what new song we sing? Our reply is, we have no other harp to harp upon, than that, whose strains have often swelled, and died on human ears. But let us change a ribbon in the wedding garment of thought.

Why have we been expending the precious ointment of our youth, upon Anatomy, Surgery, and Materia-

Medica? The truths which underlie these medical gymnastics, declare the mental energies to be independent of the particular objects which quicken them into activity. The sunbeam has to light, and it heat; whether it falls upon the sea, the garden, or the desert, where no man is; the laws of gravitation, are the same for all climates; so thought is thought, whether its action and play be seen in a Barn or a Hollow, in a Shipwreck or in a Hovel, in Astronomy or in politics, in the Church, or at the Bar.

The brain, the great Centre of the nervous system, and seat of intellectual operations, is the great standpoint of all our introductory lectures.

The external organs of the senses, have the faculty of the nerves adapted to receive certain impressions, while the corresponding organs of the brain,

are put in activity by the external excitements; the idea or perception, is according to the part of the brain, to which the nerve is attached; and each organ has a certain limited number of changes to be wrought upon it, by the external impressions."

"The nerves of sense, the nerves of motion, and the vital nerves, are distributed through their whole courses, though they seem sometimes united in one bundle; and they depend for their attributes, on the organs of the brain, to which they are severally attached".

All the nerves from the Cerebrum, to the Cauda equina, are muscular, by which impressions are made from all parts of the body, directly upon the brain. Thus it is, that the main business the depot of affections, for the management of every function, or movement of the human

body, though their all kindred parts must sympathize with each other; and the whole human system must share the pain or disorganization in the brain in its derangements.

I shall be our purpose to treat of one of the curiosities of nervous diseases, we perhaps the most interesting, (and nevertheless instructive) in the whole catalogue of diseases, and one, whose character, & causes, are as little known by the profession — <u>Chorea Sancti Viti</u>; alias, <u>St. Vitus' dance</u>.

This is a complaint far less common than many diseases of a similar character; but it is an unpleasant disease to suffer, and has connected with it, several points of analogy, with many other nervous diseases. The principal symptom, is an irregular and involuntary clonic contraction of some of the voluntary

lary muscles, which, because, and not totally, or constantly, withdrawn from the government of the will.

In tetanus, we have an involuntary, long-continued, violent, and painful contraction of the voluntary muscles, of various parts, or of nearly the whole body, while the mind is clear and free, volition is unaffected, while the muscles, which should obey the effort of the will, are urged by some stronger, over-ruling power. In Epilepsy, we have convulsions & pains, suspension of the mental functions, a temporary interruption of consciousness, and also of volition. But in Chorea, we have a different state of affairs, from either of these. There is no loss of consciousness, no depest of volition. The ordinary movements of the body, can be performed partially, or at some times; by the power of

the will, although it was at the same time, as though there were some other power, independently of that of the will, that would instantly interfere and oppose them to actions, which are not needed, and at the same time, in direct opposition to the desires of the will.

Moreover, these movements which are apparently so usual, do not occur in paroxysms, but continue throughout the day, mostly together sometimes, and even months, but partially, even during sleep; at the same time, the agitated limbs are not always still, while the senses are shut up in sleep.

This disease, however, is not attended with pain. The disorder has not been clearly described by J. G. Kerner. Those accounts of it is very graphic, and excellent, and has been exp-

ied by most subsequent writers, from whom our own views have been, in the main part, derived, and will thus exhibit the disease according to the portrait which has been left us by various authors, in addition to what has occurred under our own observation.

The commencement of the disease is difficult to recognized; beginning in the first place, with slight twitches of the muscles of the face, contractions of the fingers, and jerking of the joints of the limbs; and by degrees, the spasmodic action becomes more decided, and more general; it is further characterized by contorsions and contractions of the face, extensions, flexions & extensions, and rotations of the extremities;— in short a perpetual motion of the whole body.

All the voluntary muscles are liable to be affected by it. Those of the face seldom escape. The features are twisted into all kinds of ridiculous forms; such grimaces like the goats are produced, that bystanders are often amused, etc. I say, but, when at the same time, there is neither mirth nor pleasure in the contortions; it is a continuous convulsion. The patient is observed, frequently, in the first place, to drag one foot, and frequently then the muscles of the tongue, and of the muscles of the face, and thereby that articulation, mastication, and deglutition, are difficult, and often almost impossible. Thus also walking, standing, sitting and lying, appear at times to be impossible.

The patient will at times be observed to look at an object, with a kind of

to and fro, as a mill go at her head for a moment, and then again by the peculiar gesticulations. The disease occurs much more frequent in young girls than in boys.

If the patient be asked to put out her tongue, she makes many attempts before she is able to accomplish it. When the tongue is suddenly thrust out, and so quickly drawn back again, and the jaws caused to close very suddenly, as if she had intended it should not be seen. They cannot keep their hands in the same position long enough to accomplish anything; when at meals, they desire to carry their hands to their mouths, they are arrested, and suddenly pulled back, or turned off in some other direction, contrary to that of the will. The motions are increased temporarily, by pain.

mental emotions, or any excitement; such as particular excitation of the movements, conversation with strangers, the presence of the disease, or the hidden arrival of the physician or any stranger.

I have seen patients calming under the disease, so much excited by the denial of power desired, that it was apparent that he counteracted himself, by the violent contractions & extensions of his limbs. All the relief the patient has upon these occasions, is the sudden catch, which is but temporary often by the best effort.

Persons as a general thing, come walk quickly, better than slowly; Dr Hawkins mentions a kind of an individual, who could not walk, but could run: A boy had his leg so violently agitated, that the involuntary motions

overpowered all the better efforts of his will to control them; but a stronger excitation of the power which excites spontaneous motions, was able to control his disturbed agitations so that he could run, but could not walk: the same is observable in men intoxicated, to a certain degree, without liquor." Dr. Bateman's Commentaries. Chap. 20. "If one part of the body is held still, others will be more strongly affected; and generally one side is more affected than the other.

This is common in all convulsive diseases, and sometimes in diseases of sensation but as a rule; when one of these diseases has given only the one side affected, or when both sides are affected, the usually giving one more so than the other.

This occurs in "All Fits" Dance;

and the side most affected in the progress of the disease, not frequently changed; so that the right, at one time, will be the side affected, at another the left. Thus we find a similarity between this, and epilepsy, and hemiplegia, only affecting similar parts, at certain times.

After all the same phenomena accompany each, and have similar peculiarities, yet there are especial differences, sufficient to describe them as different diseases.

It has been called by some, in making use of a strong figure of speech, "insanity of the muscles" and I do not consider it an improper term, although it might be a difficult matter to prove the association. The arms are generally more affected than any other parts of the body. The face

has frequently a fatuous appearance; the mind in extreme passion seems little affected, and persons become lunatic little foolish. This may be denied by some, but I speak it from personal observation, and have sufficient reasons to believe it, and grounds for proof.

The heavenly planets seek their attracting magnets, and not in harmonious concord, when obeying the laws of nature; but if there should be a neglect to obey the laws of their several beings, the countless orbs, that roll in the illimitable regions of space, would be plunged in a chaos of confusion.

Thus, the brain is the grand centre of the nervous system, from which all the nerves must have their originality; and when any class of nerves are affected, the affection must have its origin

in some parts of the brain; and when one part of the brain is affected, the unaffected part will predominate, and will produce irregularities, not only in motion, but also in sense. The fine, nervous, that persons who are usually subject to chronic are of that kind, who are more than ordinarily sensitive, or what is more commonly called among the laity, "nervous". They are easily excited by new ideas, and sudden feelings, and change rapidly from one mood of mind to another.

The pulse is sometimes quick, and sharp, when the motions are rapid; and sometimes there is headache, heat of the head, heliga, and drowsiness. Sometimes the patient is attacked with sudden convulsions, and will scream, and even Epilepsy will come on, and again, there will be costiveness, and hardness of the abdomen; but in most cases

we find nothing ailing the patient except this extraordinary movement. The disease may last for weeks, or months, and then disappear, either spontaneously or by the result of treatment. Sometimes it continues for life, but the greater part of patients recover entirely, regain their looks and former stability. The foolish expression of countenance, and the inattention of the mind, disappear, and the patient becomes, as it were, a new creature. When the disease occurs in a local form, it more frequently continues for life; the persons thus afflicted, have a continual twitching, as it were, or twitching of the eyebrows, and muscles of the face, or spasmodical jerking of the head and neck. There are many persons afflicted with this unfortunate local form of the disease, which is distressing to the friends

of the patient, and renders life apparently a burden to them.
It has been observed, when there was one in a family had fits or tetanus, and jerkers, there would be others have something else peculiar to the nervous system.
This must arise, of course, from the force of imitation, as there can be nothing recognized in the character of the disorder that would justify the idea of contagion.
It is only when it occurs in adults, that it is incurable, and often then, the disease will yield to a proper course of treatment, and the patient be restored to health again. Dr Eliot thinks, it not a proper mode of expressing to say, that the disease may not terminate fatally? but that state of the nervous system, which produces it, may give in death.
He also relates a case of a strong girl,

about vivisection, which ended fatally. She did not die, however, of St. Vitus dance, but of apoplexy. The congestion of the head, which in our degree produced chorea, gave rise to apoplexy; and pathologically, it could not be said that the rise of the disease, but in the disease.

There is another case of fatal uncomplicated chorea, related by Dr. C. Hunter, in the "Half-Yearly abstract of the medical sciences," which is as follows: It was a lady of well developed muscular system, had enjoyed good health until three months previous to her admittance into the Hospital, when she had an attack of acute articular rheumatism. For this, she was bled. The affection of the heart was neglected.

On the eleventh of the month preceding her admission into the hospital, she had

menstruated for the first, and only time. On the 11th of the month following, and eight days before her admission, she caught a severe cold, in consequence of having got wet through, in a bath, and on the eight day the violent chorea symptoms declared themselves. No treatment of any moment was had recourse to.

On her admission into the hospital, the face was somewhat pale, and the articulation difficult, though possible after repeated attempts. The chorea symptoms were continual, and very violent, particularly in the limbs. The senses and mental intelligence, to all appearance, unimpaired. The movements presented slight, or only allowed very brief sayings, and they were so violent as to render it necessary to have some continuance to keep the patient in bed. Opium in small quan

bities was ordered. On the following days, at five o'clock, the Lieut de l'hôpital perceived no alteration in the symptoms. Two hours later, the patient in the next bed, noticed an abatement in the movements, and saw that the breathing had become labored, and the face dusky. A quarter of an hour later, M. Lanset, found her in the last agony, lying on her back, her limbs motionless and powerless, her face dusky, her pupils dilated, and her pulse small and frequent, and her heart beating faintly, and fully. Titillation of the nostril, and ammonia vapor were tried in vain, and in a few moments the pulse had ceased, and all was over. "At last

Without a groan, or sigh, or glance to show
A parting pang, the spirit from her part:
And they who watched her breath, could not know
The very instant, till the change that cast

Her sweet face into a shadow, dull and slow
Crept over her eyes — the beautiful, the black.
Oh! to possess such lustre, and then lack!"
Age and constitution, seem to be the predisposing causes of the disease.
It usually occurs between the age of four and fourteen, or much more frequently about the period of puberty. The tendency of the disease is constitutional. It most frequently occurs in subjects of delicate, irritable, and nervous temperament. Although it may occur in persons of very different temperament, and constitution, yet it most frequently affects those who are pale and sickly, and those, who are easily troubled up by vivid ideas, by excessive imagination. It frequently affects those who are otherwise in perfect health, and generally there is no obvious cause, either predisposing, or exciting. Yet there must be a cause, though not obvious. We find

or medical attendant, the cause may have been excited some time previous to the invasion of the disease, or might have passed unobserved; but wherever there is an effect, the cause must have preceded, or accompanied the effect.

There is an analogy between cause and effect, which would be pleasant to comment upon now that not more important subjects at issue.

It is generally admitted by all authors, that it is not hereditary, although it has affected two or three children in a family at once, but that is within the range of contagion, not of hereditary causes, but would seem to be, or to arise from the power of imitation, which I think could justly be ascribed among the exciting causes, not only of Chorea, but of many other diseases.

Imitation seems to be a natural propensity, or an innate principle, of the human family. The infant from the time it can

notice the conduct of those, who have been to imitate, first in actions, and after a time in words, all that passes in their sphere.
Even man, after arriving at the age of maturity will endeavor to imitate such actions, and words, in others, as his better judgment teaches him, are superior to those of his own education.
The disease generally commences more frequently in summer, than winter, according to some authors, but I digress upon that point, as the exciting causes are more prevalent during the latter season, than summer, and further it is never known to exist in a pleasant region.
Of the many exciting causes that have been mentioned by different writers, which must have certainly a great influence in the production of the disease, the one which seems to be most frequent, and most strongly established, is the influence of terror. Anything which makes a powerful impression upon the

nervous system, may act as an exciting cause of Chorea. Strong mental emotions or a sudden mental shock, may bring it on, in those of a nervous constitution, more predisposed to it. Of its ascertained, or alleged exciting causes, fright and terror, as I have before stated, seem to be the commonest.

It has been known to arise from a blow, or a fall on the head; but even in this case, the alarm may have had more to do with the disease, than the injury. Sometimes it comes on upon irritation of the stomach, or bowels, by the use of improper diet, by accumulated feces, or by worms; and again it is found to be connected, very frequently, with difficult and painful menstruation.

It sometimes begins about the period of the second dentition. It frequently follows a fever of a typhoid kind. In one case the old teeth remained, and the new appeared by their sides. The old teeth were drawn,

and the [illegible] symptoms [illegible] [illegible].
In such cases, [illegible] the [illegible] of [illegible] and
[illegible] the [illegible] of [illegible]; then [illegible] the predisposition, as well as the accidental exciting causes; for the [illegible] [illegible], under the [illegible] of [illegible] [illegible], and may then be removed by other [illegible]; and again, in the person may have been [illegible] [illegible] affected, & not [illegible] the disease, because he has not the predisposition to Chorea.

Besides the exciting causes already cited, imitation, fits of violent anger, contrarieties, masturbation, the difficult establishment of the menstrual functions, in girls, or suppression of that function &c, have all been considered exciting causes of the disease.

There are various other diseases which have been [illegible] [illegible] occasion or [illegible] [illegible] the [illegible] [illegible] [illegible]; in case [illegible] follow other diseases, there must be, beforehand, the predisposition.

The proximate cause of the disease, so far as we are able to form an idea, has its seat in the brain. From the whole history of the malady, it seems clear that it is not an organic affection of the nervous centres. Dr. Marshall Hall regards it as an affection of the [illegible] system, but in this, [illegible] opposed, especially by Dr. Carpenter [illegible]: "It is true, that there is considerable irregularity in the [illegible] actions; [illegible] [illegible] in them, [illegible] or [illegible] the [illegible].

Moreover, the body is at rest during sleep, and the [illegible] system [illegible].

Dr. Carpenter [illegible] supposes [illegible] [illegible] which [illegible] the [illegible] [illegible] is [illegible] the [illegible] other, is probably the chief seat of the disease, and this seems to me, to be the most reasonable theory which has, as yet, been offered, in regard to the real nature of the affection.

Some modern physiological inquirers; that one of the functions, the principal office indeed, of the cerebellum is to preside over and regulate the quality of locomotion; to keep the muscles in due subordination, as it were, to the will. That no voluntary motion certainly can be executed without the combined and consenting actions of many muscles; it is the business of the cerebellum, they say, to maintain this consent and community of purpose, to prevent any binding of individual muscles, and to make them unanimously cooperate in producing a given movement.

Now for the [illegible] of this, I [illegible] particular hypothesis, but believing my [illegible] physiological reasoning to be correct, [illegible] the cerebellum, as the seat of that change, whatever it is, which gives rise to the phenomena of Chorea. It is the only reasonable conclusion I can arrive at, from the physiological

description of the nervous system, and its various functions.

It seems very probable, that the irregular movements by which chorea is characterised, can only be considered the effects of imperfect paralysis, or some [illegible] stated, [illegible] of [illegible], in the proportions of that [illegible], as often [illegible]; but in the [illegible] consequence of the want of due harmony, and agreement between the various muscles, which should conspire, to produce the desired state, either of rest or motion.

It is apparent [illegible] of a want of the [illegible] harmony in the action of the different muscles; it is, therefore, in this sense, that chorea has been called insanity of the muscles.

The parts of the brain are so divided, and arranged, that the office of a certain portion, is to minister to the intellectual functions; at times, there are certain others [illegible]

that portion, which [illegible] to [illegible];
the premonitory symptoms, some [illegible] judgment,
by [illegible] [illegible] thus also, in order to
form correct opinions, are in conformity
with the general course of things.
Thus, also, there is a certain portion of the en-
cephalon, which govern the functions of loco-
motion; and at times also, there are altered
states of that portion, which we know, and
to [illegible] the [illegible] convulsive [illegible] mus-
cular contractions, and thus produce the singu-
lar phenomenon, of Chorea.
That portion, which, when affected, alters the
locomotive motions, [illegible] is the Cerebel-
lum and thus would consider, a priori,
that to be the seat of the disease at issue.
To [illegible] from the nature of the dis-
ease, [illegible] to establish [illegible] opin-
ions, that the seat of the disease is in the cere-
bellum, although apparently [illegible], [illegible]
to [illegible] and [illegible] of [illegible]

[illegible] so much [illegible] of the brain, and the nervous arrangement generally.

[illegible] by some, that there is a set of nerves, called vital nerves, which are not [illegible] connected with the [illegible], or [illegible] [illegible], [illegible] of [illegible] [illegible], and [illegible] vital motions, from the government of the mind. This argument seems to be simple and consistent, until we begin to examine [illegible], the [illegible] of the brain, and the course of the nerves; then all is confusion [illegible], [illegible] the brain, the circuitous course of nerves, their [illegible], their [illegible] union, are puzzling in the last degree, and [illegible], [illegible], [illegible] to [illegible]

In the [illegible] of a [illegible] what do we [illegible]? [illegible] is, that [illegible] to [illegible] [illegible]

the best, [illegible] age; and [illegible]
[illegible] anatomy [illegible]
[illegible] and [illegible]:
It is well, [illegible] 12.
that the cerebrum and cerebellum, are as
to [illegible] as [illegible]; that [illegible] to
[illegible] the [illegible] and
that the nerves which are traced in the body,
are [illegible] [illegible],
[illegible], [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible]
[illegible], [illegible] [illegible] [illegible] [illegible]
they are in origin, from the brain.
It is [illegible] well, that [illegible] [illegible]
of the [illegible] [illegible] the [illegible] of the [illegible]
adapted to receive certain impressions, while
the corresponding [illegible] of the brain, [illegible]
[illegible] motion by the [illegible] will; that
the idea or perception, is according to the
part of the brain to which the nerve is at-
tached; and that, [illegible] [illegible] [illegible]

limited number of changes to be wrought upon it, by the external impression. Further, that the nerves of sense, nerves of motion, and the vital nerves, are distinct through their whole course, though they seem, sometimes, united [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] the impression [illegible] [illegible] [illegible] must also receive the impression, and concluding, a posteriori, that the cerebellum is affected, the chronic symptoms [illegible] [illegible] [illegible] cerebellum [illegible] [illegible] of locomotion, and not volition.

[illegible]

Dr. Heberden says, that four eighths of the pa-
[illegible]
to be the proportion others have met with.
Chorea is sometimes complicated with other
diseases, and more frequently than any other
with hysteria, since they both are nearly essen-
tially diseases of the female sex. occur in those
[illegible]

The onset of the disease is, [illegible] by the, [illegible]
[illegible] gradual, so that [illegible] may be [illegible] days
or longer, [illegible] when the
cause has been a sudden [illegible] nature, reach its height in a few hours.
[illegible] cases so
sudden, in most cases, it begins with
some unusual, and singular move-
ments in one of the upper extremities, and

[illegible] being noticed by persons accustomed, always, being near them. Sooner or later, they increase in severity, and extend to other members of the [illegible] to the tongue, [illegible] case is [illegible] type.

It is said by some, also, to occur in conjunction with acute rheumatism, and with the rheumatic peculiarities, and with some [illegible] various [illegible]. Occurring with cutaneous complaints, however, seems to be a [illegible] accidental, or perhaps owing to imitation of the peculiarities of the different [illegible]. I should judge however, that the [illegible] seem to [illegible] in conjunction with rheumatism, as the nature of the [illegible] seem to be very different to each other; although rheumatism is [illegible] a disease of [illegible] and peculiarity of [illegible] at the same time; yet that the [illegible] allows [illegible] a [illegible]

in favour of general pulsation of the arteries, under stimulation of every other, and of itself.

I saw a subject of Chorea, obviously had a attack of inflammatory formation preceding that of Chorea, and the violence of the nervous symptoms, was always in proportion to the violence of the inflammation preceding.

Mr. Tod says: "He also saw a boy affected with Chorea, succeeding patient in the hospital. He soon attacked a stout fellow complaining, the next, and having his history both a little, infer he had suffered acute articular rheumatism."

The diagnosis is so simple, and so easily be detected, that we will not be liable, at any time, to be baffled in making a correct one.

Idiopathic, or pure Chorea, independent of organic disease of the nervous centres, and of convulsions, rarely, very rarely fatal.

Nevertheless, even under these circumstances, there has been some loss of the fatal result recorded.

When the disease is occasioned by an irritation

of the brain or spinal marrow is becomes very dangerous. The degree of danger, of course, depends on the disease which determines the tremor. When the convulsive motions become incessant, and the respiration embarrassed, and often difficult or painful, by the placing the trembling organs, a fatal termination is to be apprehended.

Many different plans of treatment, and a variety of drugs have been proposed, for the cure of the disease under consideration.

From these facts alone, we are led to believe that the treatment of the disease is not altogether appreciated by the profession, and also considering that fatal cases are rare, that the disease tends naturally to a recovery, in a great majority of cases. This particular of the natural history of the disease, is shown also by the evidence of Dr. Bardsley, senior, who says: that in the Manchester Infirmary, notwithstanding the variety of treatment adopted by some in

practitioners, an incurable, or bad, at present existing in the course of thirty-three years."

Many authors write, that a great number of specifics have been used, and quite independent of any effect in the recovery of the patients to whom they are administered. That may all be true, but admitting that not one of those cases would have been fatal, might not some of them have terminated into permanent chronic symptoms, as has been in many instances? The great variety of causes, from which this malady arises, I think demands a variety of specifics for its treatment, and each properly administered may produce a salutary effect.

I admire the rule laid down by Dr. Tiggs as a standard in the treatment of this malady; it says: "It seems to me that the only rules to be laid down for its treatment, are those which apply to all the various affections, depending upon functional disorder of the nervous system.

There are two [illegible] to be [illegible] with, the removal of the cause [illegible] disease which may exert an irritative influence upon the nervous system, and the employment of some remedy, or [illegible] to act [illegible] upon the [illegible], and [illegible] certain [illegible] properties, and [illegible] carefully selected remedies."

Dr. Watson says: "The treatment of chorea embraces two definite objects, the first, and chief, is, to give stability to the unduly mobile nervous centres. The second is to remove, or avert whatever may be likely to produce unnatural excitement of their incident nerves."

I think the first object should be, to remove or avert everything that is likely to produce unnatural excitement of the nerves; and in the second place, to give stability to the unduly movable nervous centres.

Dr. Watson further says: that the complaint is never dependent upon any inflamma-

long disease". I am sorry to say, that I am again compelled to differ with the learned author, the cause of which, I have only from experience. I have seen two cases of well marked chorea, one of which I before stated, which were exclusively dependent upon an inflammatory disease.

For the treatment of Chorea, local bleeding is highly recommended, where there is headache; and setting aside the complications with headache, we may treat them successively, if we have at our command purgative medicines, the shower bath, preparations of iron and of arsenic, and the oil of turpentine.

The proper treatment in the beginning will be, to clear out the bowels with a dose of calomel and jalap, or some other active cathartic, and the use of such medicines, should be persisted in, as long as there is much fecal matter brought away.

Purgatives have been extensively employed, and often exclusively relied upon, by some very reliable authorities, especially the English practitioners.

When relied upon exclusively, in the treatment, says Dr. Higgs, an active cathartic is given every day; or every second or third day; and there can be no doubt; that many cases have recovered under this plan.

Purgatives, however, ought to be used only to such an extent, as may be necessary to secure a gentle and healthful condition of the bowels. Dr. Copland says; that he always commences with the exhibition of a full dose of calomel, either alone, or in combination with other purgatives, or followed by them in five or six hours.

He also says; that the doses of calomel should not be frequently repeated, in the disease, and thinks that it is not advisable to continue purgatives long, without alte-

or hitting them with a tonic, or anti-spasmodic remedy, or with both, or alternating them, with these remedies.

With all due regard for the superlative purgative, said gained in the treatment of Cholera, I think that they are not sufficient in a severe, well marked case.

Tonics should invariably be given, after a few full purgative doses, and in fact, I believe more cases will be cured, with tonics alone, than with purgatives alone. Of the tonic remedies recommended by authors, the following are some of the most efficient: Sulphate of Zinc, Copper, Silver, and Sesquioxide of Iron. Among the above, the Sesquioxide of Iron seems to be the most efficient remedy, given as follows — Prepared with twice its weight of treacle, so as to form an electuary. Begin with it in half drachm doses, and gradually increase the quantity to a drachm, or up to two drachms.

Dr. Hamilton Roe, in the "Half yearly Abstract," states that he has employed the Ammonia Sulphate of Copper, very much, in the treatment of cases of convulsions, treated in the Hospital Sends, the patients being usually children under 14 years of age.

In general the Sulphate of Zinc, and the Protochloride of Iron, had been tried previously, and without benefit. The dose given has from gr. j to gr. iii daily. "No use, says he, in this complaint is not novel, although not often tested in this country. In Italy, it has gained a considerable reputation, and is known by the name of the Specific of Tissot".

"Antispasmodics", says Tyler, "seems to be, in conjunction with a moderate use of purgatives, and careful regulation of the hygienic conditions of the patient, constitute the treatment in the majority of cases".

of the different remedies of this class, the one most employed at present is, I think, the cimicifuga racemosa. This was first introduced into use by Dr. Jesse Young, and is now extensively employed, and much relied on.

Dr. Wood says: "I have in repeated instances found it of itself adequate to the cure of diseases." The cimicifuga is given in powder, in tincture or in decoction. The usual doses are from gtt to ʒj of the powder; from ℥j to ℥ij of the official decoction; or from ʒj to ʒjj of the saturated tincture, given three times a day.

The two cases previously referred to, which occurred under my notice, were treated with the black snakeroot, and senna, and effected perfect cures in each. It seems to be conclusively agreed upon by the

researches of many different observers, that there is no characteristic anatomical alteration in Chorea, since, in a large majority of cases, examined after death, no lesion of the Cerebro-Spinal axis can be detected.

Dr. Sendet, on making examination, makes the following statement: "On the examination, twenty-four hours after death, no alterations, which could be related to the Chorea, were to be found;" The heart was congested with dark blood, and so were some of the mucous membranes, as might be expected from the asphyxial symptoms, preceding death; but the brain and chord, with their membranes, were quite healthy.

Some slight adhesions, in the anterior surface of the heart, were the only traces of organic disease.

To your worthy consideration, the above is respectfully submitted.

G. S. Clarke M.D.

An Inaugural Dissertation On True Croup

Submitted to the Examination of the Provost, Regents and Faculty of Physic of the University of Maryland For the Degree of Doctor of Medicine

Feby 14th 1856 By Albert Harrison Dickinson Maryland

"If what appears little be universally despised nothing greater can be attained; for all that is great was at first little, and rose to its present bulk by gradual accessions, and accumulated labor."

Amidst conflicting opinions, it is with extreme diffidence that we enter on the discussion of a subject; which, though from a just idea of its importance, has attracted the notice of minds the most contemplative and accurate in their survey of disease, in the annals of Medicine, yet still presents difficulties sufficiently embarrassing to abate the ardor of youthful investigation, and compel the mind to recoil with the consciousness of its own inadequacy.

Not the least appalling, of the obstacles which confront us, is the contemplation of the magnitude and malignancy of the evil which we have to oppose; a malady which seems to have been entailed on innocent moments of early existence

and which spread its devastating ravages wherever it firmly fixed its hold.

Emboldened, however by the encouraging suggestion of one of the best of men, that "he who suffers not his faculties to lie dormant has a chance, whatever be his employment of doing good to his fellow creatures." We will, though fully aware of our incompetency even to do justice to this subject; much less scale the heights of perfection, engage in an inquiry into its nature.

Consulting the pages of ancient medicine, little satisfaction can be obtained respecting the true denomination of the disease, which nosologists have restricted, the term Croup, all appearing in comparative confusion: Tracing it through the records of Physic we find little concord among the views entertained, relative to the phenomena of it. Some of the most distinguished and learned

of the medical profession, who have generously proposed to enlighten the world, have clashed in opinions strenuously: even at that period when the dawning beams of science began to enlighten mankind, may be perceived many of the ancient features, exceedingly prominent in the idea of those who turn their attention thither. To this period of illumination and extensive improvement in which every effort is characterized by a natural and irresistable propensity after knowledge, we we to look for correct and accurate descriptions as well as pathological truths,

In the present inquiry, we restrict ourselves to the consideration of True Croup; and shall observe the order- Etiology- Symptomatology, Pathology and Therapeia; each of which we shall notice distinctly.

Before commencing the plan of investigation proposed, we will take the opportunity of confessing our disapprobation of the name, which

this violent inflamation of the air passages has, by many of the profession, been in to are described, allhough we may be unable and shall not attempt to assign it a title strictly pertinent. It has nevertheless from the prolific minds of others received appellations which better comfort with modern views of the disease.

The exudation and Pseudo-membraneous formation in the air passages, which is so generally suggested by many medical writers; the terms Angina Polyposa, angina membranaca as appropriate designation of Croup, is neither invariable in its occurrence, or of an uniform extent in all cases; but Cullen the great Magna apollo, has shown of his beams amongst the greater light, to persuade the coolness of the present day of the conviction of his merit and makes no distinction between Cynanche Trachealis and Cynanche Syrangeitis as the English names for Croup.

But the name of the disease should be derived from the most important anatomical changes, and position and almost always have specificalness of definite boundaries giving origin to the former appellation Cynanche trachealis or True Croup, which we design to confine ourselves and note in particular its morbid changes,

Croup is not essentially inflamation of the Trachea, but often the clothing mucous membrane of the Larynx or Larynx-trachetis; But this phenomenon is more marked as secondary; Common in Measles and Scarlatina. not unfrequently it extends its influence into the ramifications of the bronchi and terminates in the pulmonary vesicles; but to this designation we shall object, as the varieties of Croup have presented, peculiar and distinct anatomical characters; of the two. Catarrhal Croup, and

and membranous croup! Catarrhal croup may present different inflammatory action, this the mild - not attended with any serious pathological condition, only in consequence of spasmodic symptoms, and its amplitude to be converted into Pseudo-membranous, and as a concomitant change proximate to that which we propose to notice and discuss.

Croup may and has received many definitions, a high vascular irritation affecting the entire respiratory passages, combined with spasmodic closure of the muscles of the glottis, which is influenced by many causes, therefore we will not take out the Cynanche trachealis, true croup, whatever be the inference deducible from facts of the amount of secretions, and exudation from elaborate demonstrations, and as we feel bound to confess the fair pretence and complacent assumption which the

different post-mortem examinations reveals withholding only sufficient room to do justice in feeble attempts to the subject, to meet our efforts with the ready accession of our learned readers.

But of the various diseases, which prevails especially among children, there is none it seems to me, that excites, or ought to excite a deeper interest in the members of the medical profession than the one to which I have appointed to dedicate the present address; its fatality alone is sufficient to invest it with the highest importance in the eyes of all who assume the responsibility of the care of those attacked by it.

The proportion of fatal cases to recoveries has been variously, and vaguely estimated by different authors, all however agree that it is one of the most fatal of children's diseases! It is dreaded by all who come in contact with it, not only for the well

known difficulties of curing it, but for the dreadful suffering it entails upon those whom it attacks.

None who has carefully and anxiously watched its insidious beginnings, its slow and stealthy progress, and the terrible suffering which it produces, can fail to feel an interest in whatever promises to elucidate in any measure its history; or to cast the faintest ray of light on the best method of treating it.

Etiology! In endeavouring to notice in succession our order: first, the Cause of the disease, we deem it expedient as well as classical to make a subdivision into two Species: viz- Direct and Indirect, and shall speak of them as Idiopathic, when it attacks the trachea, bronchia and larynx; and Symptomatic when it appears as a consequence of previous

disease, Measles, scarlatina or Cynanche Maligna; for it has been found as the attendant of these maladies.

Youth seems to be the predisposing period of the disease.

Among the exciting causes of croup is sudden change and exposure to damp and cold atmosphere, thinly and poorly apparelled, and variations in temperature of rooms to which the child may be exposed.

It has been attempted by some ancient writers of medicine, to account for the frequency and pathology of the disease in early life to the imperfect developement of the organs of the voice before puberty, which has been refuted by the best of authors as hypothetical, since it does not account for the rarity after five years of age.

The periods at which the disease is most apt to attack has been the

subject of much discussion, and thou-
-sands of cases are rendered to the medical
jurist as criterions, exciting suspicion
and adopting precaution against foreboding
attacks, yet very conflicting and equi-
-vocal is the evidence adduced from
tabular facts as to warrant the prof-
ession no compromise of honor and
wisdom in expressing decisions;

The general opinion is between two
and ten years, as the time which a visitation
is chiefly to be apprehended, and as the
strongest predisposition says Dr Cheyne
"as consequent upon early weaning and
change that ensues in regard to diet," as
to render the blood suitable to plastic exudation
and as greatly predisposing by the constriction
of the larynx, and nervous excitement
to which that age is liable, and much more
subject to males than females, to run in

families also, robust strong and rosy complexion are supposed to be most frequently affected.

In reference to many of the most important points in the history of the disease writers have pretty well agreed, but croup like many other diseases depends on atmospheric and telluric causes, is modified in many of its symptoms by peculiarities of air, water and situation. It is influenced by peculiarities of climate and localities more than any other of the respiratory diseases; it is endemic in particular localities, residents near the sea and proximate near the mouths of rivers, where moist soil and damp atmosphere, which has been enumerated as predisposing consequences of the disease, as illustrated by comparative large towns & cities, and frequency in rural districts, it is more frequent in winter & spring. We find also it has been characterized as a contagious disease; of occurrence in

two of the same family, like Cynanche Tonsillaris, the most remarkable epidemic prevalence, and which created the greatest excitement and distress, was that which produced the death of Napoleon's nephew, the Crown Prince of Holland, and induced the Emperor to offer a prize for the best essay on the disease, for which we are indebted to many French Physicians for learned and interesting works. Since when, the disease has widely diffused itself, and appearing sporadically over large countries,

The concomitant occurrence of croup upon exanthematous and febrile diseases, is as variable as the eruption, and appearing under the most unfavorable conditions generally, of low typhoid and adynamic state of the system and marked as its indirect or symptomatic course, the true diphtheritic sore throat, with this connection of false

membrane as far down as the larynx, but more commonly the mucous membrane in this stage is confined to the mouth, fauces, tonsils, suffering inflammation and ulceration of very malignant character and as a sequela to measles, the most dangerous of all is its complication running its course rapidly, and working so insidiously that it behoves our most guarded attention and interest even then under these circumstances it not unfrequently disappoints the most well founded hopes and strict judicious treatment, when it assumes this favorable character it is of an epidemic influence, or contagious an unfavorable hygenic condition and not our ordinary cases of attending influenza, or more of a sthenic character with which diphtheritic angina may be confounded and requiring serious antiphlogistic treatment consequent to angina of the same nature

Symptomatology — The progress of an attack of Croup is so various and different, that a distinction is difficult to give it a true characteristic phenomena of N, but we shall endeavor to describe the disorder by the first, second and third stages, yet they are not always distinctly marked,

The first is denoted by symptoms of a catarrhal character, irritation existing with slight fever, deplexion from the nares, and cough that presents no peculiar character, the respiration is not so perceptibly disturbed, sore throat, or uneasy sensation about the larynx, but is regarded so trivial as scarcely to call attention of the parents, or excite fear, yet these are not infallible signs of an aggravation of the disease, as the transition is slow and gradual with onward and insideous progress to a more severe form, as to escape the notice of persons.

more than that of slight Catarrh; but generally its progress is destructive and rapid in the onset, and subjects the little one so unfortunate to fall a victim to its ravages by immediate and speedy death.

But this rapid course is rare, and duration of the disorder in the first stage various, the transition into the second being gradual, and in the course of thirty-six hours, nervous marked, and augmented symptoms, more rough and of a modified character, as ringing and hoarse, for a husky sound of the voice, weakening into a whisper, this peculiarity of cough precedes inspiration; then the symptoms of a characteristic kind, and aggravation seems to occur alternatively as soon as the cough is perceptibly modified, the respiration undergoes a change of equal proportion, these are accounted for so,

pathognomonic signs, which are most frequent at night, and the first indications of a true Diagnosis of the disease, the Child appears through the day cheerful and playful without any apparent suffering, the disease remaining stood in remission, with symptomatic, or a succeeding attack; with all this suppressed respiration is still continued, but skin, face flushed and eyes suffused, breathing hurried, cough frequent and tributous, pulse full and quick, Child fretful and languid, sometimes disposed to sleep; but soon it has a return of exacerbation from the slightest cause; with increased violence, in slow inspiration of a sibilant character, as if passing through a small aperture, days, succeed of increased intensity, as of impending suffocation, the whole chest heaves with inspiratory efforts as from imminent danger and respiration from forty to fifty in a

minute, and after this degree of violence subsides, and relaxes for some time, with intervals of comparative ease, soon the little one is again startled from phantasms or terrors, now similar symptoms supervene as in the antecedent attacks, yet the disease marks, on to direct suffocation, frequently without any intermission, though more severe, with constant efforts to respire, the intermissions and paroxysms are less marked; the child throws its head back, with endeavors to increase the capacity of the trachea, and gasp in quick succession of exacerbation for more air, while the abdominal muscles co-operate energetically in expiration, respiration is irregular and unequal, pulse weak and feeble, in the midst of these sufferings of the patient, coma or convulsions closes the scene.

The tendency of the disease in the third stage may be mitigated by suitable treatment

the great restlessness may give place to ease, and the parched skin grow moist; respiration become tranquil, cough loose without any copious sound, and produce impressions that there are concrete substances loose and moving, backwards & forwards, by respiration within the trachea, this substance is viscid mucous, transparent or opaque, occasionally mixed with flakes and shreds or tubes of concrete fibrinous matter; this fibrillating substance covers the laryngeal cartilages the trachea and bronchi extending into the lungs, it is more soft and spongy just below the larynx, where it generally commences; and more dense and firm in the wind pipe and bronchia, loose & pulpy and broken where it penetrates the air tubes; this adventitious is frequently absorbed by mucous or muco-purulent matter, or could be easily expectorated.

had the child sufficient muscular power to inflate its lungs; but this sort of expectoration rarely occurs - but if so gives great relief, and amelioration of all symptoms for a short time, or recovery.

The prognosis may be collected from the general condition of the child, and always no better than doubtful and unfavorable, as chance of escape is small though the treatment is better understood than formerly, and the recoveries and deaths are about equal, to a majority then fatal; much depends on the early visit and seeing the patient in the first or early stage - prospect small if a general setting in of the second stage; but a general abatement of all symptoms is evident if proper treatment be adopted before a full developement of the disease otherwise doubtful; we may venture to hope when the dyspnoea is reduced,

louder and lower cough, attended with expectoration, or vomiting, of mucus intermingled with shreds of membrane. Voice relieved anxiety and restlessness partakings ness, which inspires us to strongly indicate a favorable prognosis, and if distended for any length of time, the disease may, after amendment without any assignable cause, be succeeded by speedy death, all the symptoms being augmented the false membrane reformed. Bronchitis and pneumonia induces us to form an unfavorable opinion) suppressed voice changed from stubborn to excitement breathing, the tips turn blue and the skin loses its heat to a cold clammy sweat, convulsions twitching of the angles of the mouth pulse feeble & intermitting, drowsy and comatose symptoms and the child rouses only to renew the struggle for breath and dies by way of apnoea, with all the embittering horrors & distressing scenes that this alarming disease inflicts

Pathology— We now come to inquire into the above mentioned morbid inspection and formation, and ask, what is that condition of the respiratory passages which constitutes the proximate of Croup? or, whence arises the symptoms?, It consists essentially in the inflamation of the mucous membrane commencing at the larynx, extending through the trachea and frequently reaching the bronchi and pulmonary vesicles, with more or less abundant concrete fibrinous exudation and formation of false membrane! Some have supposed it to commence at the ala of the epiglottis, larynx and precede the deposit in the covering of the cords-vocales and extending no further, but as a general thing it extends to the bifurcation of the bronchi, the exudation is more abundant and therefore the resulting membrane is thickest on the surface of the trachea

where the mucous follicles are most abundant and numerous, this adventitious membrane is commonly at or below the larynx of the trachea where it is lining lost and in the trachea dense and thick, lower down in the bronchi pulpy and loose, It has been observed in the air cells, preventing bronchial polypi and deposited tubes, as suggested by Dr Thorpe to resemble macaroni boiled in milk. In some instances it presents a thick purulent matter, or glaring mucous interspersed with shreds of lymph but frequently thick, tough leather like opaque or of a whitish yellow consistence, and as closely related to the fibrin of the blood and exudations that occur in serous membrane; it has been discussed by many medical writers and some very strong and irrefragable evidence proposed describing the source & phenomena of this deposit of false membrane, Dr Rauche says, it is formed of plasma of the blood

that exudes from the engorged blood vessels of the part similar to what takes place in the pleura pericardium & peritoneum and all serous sacks Dr Allison makes a strong allegorical remark in substantiation of this account, "that there is in all inflammation a tendency to the exudation of plasma from the vessels of the inflamed part." that an exudation does occur is unequivocal, yet, one battle lifts fibrinous and more albuminous, than that deposited from serous membranes, that it is not plastic, is yet to be decided and susceptible of organization,

To afford a means of judging the difference between the different exudations serous & mucous membranes, we refer to the American Medical Journal and written by Dr Pasley explanatory of the formation with reasons and cases, and published in April 1851. his definition appears

apparent, nor it is doubted whether he will receive the support of the medical profession for his definition; He says this exudation may become deposited, provided it is not at once removed, (as it generally is in adults, but not in infants,) by cough; reabsorption very seldom occurring in this disease though it is not impossible; It become degenerated into pus, purulent matter and thus of course be detached, which is the most common result. It may become organized into a false membrane This is now possible if the blood is rich in fibrine as in plethoric children, if there is but little cough, an adult generally expels it thus, and if time is allowed for its developement, less time being required in the child than in the adult, for its formation.

Can this disease occur under any other

pathological condition than that expressed by Bouchut, "without a false membrane, croup does not exist", this membrane may supervene upon catarrhal irritation by emmerging into inflammation, and plastic lymph is thrown out and this condition is the essential element of the exudation accompanying inflammation, that croup is inflammatory no one can doubt, and many cases are accompanied by the formation of false membranes. In children this membrane is formed in about one sixth of all the cases of the disease, while in adults this is of rare occurence; In adults it is usually ejected by cough and less liable to organization, while in infants it is greater, though it is a comparatively rare result, considering the whole number of cases.

It is not necessary to give a specific inflammation for the formation of this membrane - if so would it not be equally so for cases of pleurisy in which adhesion occurs, but merely an inflammation of the larynx & trachea offering in its essential nature nothing peculiar from other cases of inflammation of the parts, either in infants or adults produced in both by congestion, irritation and therefore nearly always by catarrh. It is attended by exudation of plasma upon the surface of the inflamed membrane. The inflammation subsides in part in the occurrence of exudation, it becomes absorbed, or form false membrane but at the commencement of the disease it cannot be predicted, but if formed it will be a spontaneously detached, if life is prolonged its removal does not insure recovery

the parts, red; vascular with abrasion presenting a worm eaten appearance.

Therapeia! — In sketching the plan of treatment of croup, it would be conforming to the method, to enumerate the remedies as they appertain to the several stages, but if it be recollected that the disease makes its appearance in shapes so opposite and various, it will readily be discovered how futile, and of no importance such an attempt would be; Originating as we have seen from such specific causes our first efforts should be to guard against any catarrhal cough, "ringing cough" hoarseness and loss of voice is perceived, especially if the child belongs to a family subject to croup, it should be protected, and carefully watched when a predisposition or renewal of some of the symptoms present themselves, to be kept in the house and put on farinaceous diet and the functions of the bowels attended to,

and a course of treatment is managed that when the croupal symptoms appear to subvert the irritation and inflammation, and adopt the secretory process, and prevent the production of false membrane, and the separation or possible solution of that already existing & promote absorption; We shall however mention in a general way the means usually employed to extinguish the disease; If the child is seen early or at the outset of the disease, before the worst symptoms, or febrile excitement occurs, it would be well to confine it to nauseating medicines, Ipecac, Antimony, Squills or Coxes Syrup, to be kept up for ten or twelve hours, at short intervals, till it vomits and by applying some rubefacient to the throat, hot salt to bring about the perspiration, by adopting these measures we may anticipate the seizure of Croup.

When fever and difficult breathing

exist with other symptoms denoting the dis-
-ease has actually commenced, under these
circumstances, the first principle to be held
in view is to subdue inflammation and
obviate the tendency which the mucous
membrane possesses, to the production of
membranous concretion, our first effort
is by blood-letting if the child is strong, pleth-
-oric, pulse full and vigorous, this the most
direct evacuant remedy, proves in the early
part of the disease essentially serviceable
and of the greatest utility, it should be carried
to the extent of answering determinate ends,
to reduce the augmented action and con-
-gestion of the parts, the mode and amount
should be regulated by the effects produced,
the design is to reduce the pulse, and deter-
-mination of blood to the inflamed tissue,
and not to bleed to syncope, but produce
an effect on the system or relieve the congested capillaries.

The quantity Dr Cheyne thinks to be taken from children under two years, should not exceed five ounces, But we must remember that topical bleeding in an adult, becomes equivalent in its effects to general bleeding when used for children. Venesection adults, Cups & leeches for young children is the usual mode adopted, and no precedent is held as invariable, of the amount and manner proportioned to age, but much depends upon the condition & circumstances of the case, some recommend (Dr C Ployland) One ounce for every year, after two ounces be taken for the first year, or two leeches for the first year, and an additional one for each additional year, These rules are undoubtedly true in many cases, but no restriction to be confined to them as general and unvarying. Such precision is unequivocally empirical,

Dr Porter observes that, "it is not sufficient to diminish an increased action unless the constitution be kept until the period of danger is over, in a condition that will render a renewal of that action unlikely to occur." Now the best means of affecting this object is to employ nauseating medicines simultaneous with the bleeding, it is not to excite the act of vomiting that is necessary, yet this effect is often attended with marked relief, promotes expectoration and discharges the threads of membrane, the emetic or act of vomiting should precede the blood-letting.

Dr Cheyne thinks at least ten minutes should supervene, the loss of blood assists the effect of the emetic and lessens the risk of congestion of the brain, so apt to occur in the straining efforts of vomiting. Thus produced at a small expense of the constitution, a degree of depression

sufficient to overcome the disease and be kept up until the fever; hurried respiration and other dangerous symptoms disappear. The effect of the emetic to produce and prolong a state of nausea and faintness depresses the heart action, and empties the congested capillaries of the diseased parts. To keep up a state of debility, and indications present, tartarized antimony would be the best remedy, as having power in both spasmodic, and inflammatory croup, by exciting salutary revulsions and equalizing the circulation, and frequently putting an end after bloodletting.

This is the best remedy as the desired effect, is quickly and actively produced, a solution of one fourth, to one third of a grain dissolved in water furnishes a comfortable draught to the child, being tasteless and no struggle or excitement produced, as is so pre=

-quently occasioned by the administration of medicine to children. During this time the lower extremities can be immersed ten or fifteen minutes in a warm bath; if any tendency to perspiration, uneasiness, lay in bed and wrap it warmly with clothes to keep up transpiration, two or three grains of calomel may be given every two or three hours, or as Thayer advises, who is supported by many practitioners, give two or three grains of Cuprum, two or three of James' powder, given at that intervals, the second or third dose of calomel is expected to move the bowels, if it fails, give a drachm or two of castor oil, Mercury cannot be substituted for blood-letting, or be trusted in the active stage as the well known virtues of the drug to control, and arrest the progression of congestated lymph, in other textures, but this condition depends upon the albuminous part-

of the blood, and whether Mercury controls adhesive inflammation, when set up in mucous tissues is questionable, yet the effects of tartar Emetic, is speedily and actively obtained in restraining active inflammation, we get the effects of this drug readier than of Calomel; yet after a full administration, and elapse of time for the benificial effects of the antimony, the influence is not decided by abatement of the symptoms, then Mercury will hold the best among remedies. After a subsidence of the more inflammatory symptoms, Counter irritants to the throat and chest. Blisters have been recommended, but with doubtful propriety, and attended with great danger from sloughing! Vesication will often remove the remains of the inflammation and prevent a tendency to recurrence, for this purpose Oil of Sept. or Solution of Amonia with olive oil, Camphor or spts of Rosemary.

Tobacco. Cataplasm, I think avoid using with the intensity of the symptoms, as it threatens great danger. Stimulants expectorants, and nervous stimulants now will effect great good, when the lungs are overwhelmed with mucous and purulent secretions, while antiphlogistic measures are continued. Carb. amonia, senekа, assafoetida in decoction by the mouth and rectum, mine why milk punch, musk and valerian;

When the active treatment, recommended has been judiciously employed from the outset we shall have the satisfaction of finding an abatement of the symptoms, fever less and respiration less laborious and cough easier, we know that our treatment has been so far successful, but it will become our duty to watch and anticipate a relapse and ward of the danger, by strictly enjoining an antiphlogistic plan, and directing the utmost vigilance against

a return of the symptoms! But when our remedies have been unable to control the disease, or has run into the second stage before assistance has been called, our treatment must is somewhat different, we have still an increased action to reduce and modify, to contract the effects of that action in the production of false membrane in the larynx and trachea, congestion in the lungs and in the advanced stage in the brain! The time for bleeding, which should be considered rather as a preventative than as a cure of inflammation, has passed, it is necessary permanently to reduce the strength of the patient, when all his resources will be wanting to carry him through a protracted, but natural efforts of recovery. If we have taken blood at the outset it must be cautiously, Dr Cheyne recommends antimony in the second stage, in much larger doses,

like similar results as in the first stage, are obtained, as the system will bear much larger quantities, from the depression of the disease, but when the action of the heart is reduced and pulse slow and vomiting great, or if it, owing act upon the bowels stop the antimony, the nauseating effects will afford the best chance of reducing and altering the condition of the diseased parts, and if all the previous symptoms return with collapse recourse must be had to stimulants, brandy, ammonia &c

In the second stage, it is, that calomel is looked upon with useful effects, as equalizing and quieting vascular action in connexion with antimony, Blisters may be useful, but the risk is the same as in the first stage, from their annoyance and restlessness produced upon the child and difficulty to retain it in the desired place, but never applied to the throat, but in the breast thorax,

The period of the second stage and after the formation of membrane our case becomes almost hopeless, let never despair of a sick child, for this condition bleeding can scarcely do good, and less efficient, our object is not to deplete the patient, if avoidable, and should be unguardedly, and only in emergencies of the case demands, in some cases the effect would be astonishing and gratifying, but the particular cases must be well understood and appreciated, the principle which are to prevent further formation of the false membrane; effect dissolution, absorption and suppuration of that already formed and favor its expulsion, the most effectual mode of combatting the first indication is bleeding, as it moderates the severity of the inflammation, diminishes the amount of effusion and brings the

system under the influence of mercury in small doses, it is more apt to be absorbed and changes the nature of the secretions and inflammatory process after it passes, and the green stools have passed. It should not be given for this purpose, but to bring the system its influence, ptyalism cannot be expected as an evidence in children very young, of so the same effects as produced in adults, & mercury prevents the production, causes liquid secretions, favors separation and probable solution of that already existing, this meets the second indication of absorption of the adhering exudation. In diphtheritic variety associated with scarlet fever, and the exanthematic, bleeding is always best either local or general, local preferred; Blisters when complicated with bronchitis and pneumonia, In croup of whatever kind depen

the verge of exudation, indicated by the condition of the fauces in thickening its membranes; cauterizing the part with nitrate of silver two scruples or two drachms to the ounce of water, muriatic acid and powdered alum! Dr Meigs recommends alum as an emetic, as favoring the expulsion of the membrane, and producing no exhausting effects, Sulph of Copper & Sulph Zinc are also used as emetics, Copper is much the best, but when the action is sthenic and the inflammation of a high grade, tartar Emetic! These are the best modes of obtaining an expulsion in the second stage, when the child is cold and sinking! Strength exhausted our hopes are in stimulants, Carb Ammonia Wine Whey and spirituous fomentations external with anodynes and antispasmodics to quiet external agitation! The last resort will be tracheotomy, but we cannot expect much

from the plan, it being attended with great hazard and with no gain as a medical measure to the cure of the disease, as the inflammation extends generally into the lungs and small bronchi, frequently these organs are so inflamed as to be unable to the performance of their functions, not because air cannot get into the lungs, but by it we add to the injuries by producing irritation, frequently the membrane does not extend below the larynx, and by frequently no membrane exists, but the symptoms dependent upon the thickening of the walls of the trachea, these are the only indications for its use, but great danger attends this condition in the operation, making it almost equivalent to the disease, But we still have a diseased condition of the lungs remaining and to the removal of that, we contribute nothing by opening the windpipe, but on the contrary add a new cause of irritation.

Respectfully Submitted

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An
Inaugural Dissertation
On
Gravel
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by
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of Chat. Co
Md.

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Prof. Geo. W. Mellenberger

in

grateful acknowledgment

of

his invaluable instruction

this Thesis is

most respectfully

inscribed

by

Chapman Harris

of Chat. Co

Md.

Gravel

Syn. - Lithiasis - or Calculous disease
This disease which is technically called Lithiasis is more commonly known as Gravel. It derives its name from the greek word "λιθος" a stone. & is characterized by the deposit of an insoluble powder as the urine is voided - if this insoluble material (if I may use the word) is not formed until the urine is cold it is called a sediment. if it is dislodged in fine powder from the bladder it is called gravel and if this insoluble precipitate is thrown down within the bladder it is then called stone. And altho' my subject is headed Gravel yet I shall have to describe all three of the above-named affections - not as separate diseases however but as modifications

of the same general affection as all are of the same nature so far as pathology goes and are dependent on one common source for their origin.

But to understand the formation of this deposit, we must be familiar with the chemical constituents of urine in the healthy state. and see what variation from this healthy standard causes disease or rather how much urine may vary — within the bounds of health — from its normal condition.

There are three varieties of urine even in the same individual the same day which may and do differ very materially in their chemical, as well as physical properties — namely — 1st the potent — which is passed but a short time after drinking freely ~~of~~ and is for the

the most part of a pale colour & contains but little solid matter & has a specific gravity of low, not often exceeding 1.006 or 1.008. 2ly The chylous variety, which is that which is passed directly after food has been taken, the specific gravity of which is said to be generally increased & according to Dr. H. B. Jones its acidity is generally less, "especially when animal food has been taken". This celebrated writer thinks in this case it may even be alkaline. 3rd. Is the sanguinous variety or that which is passed some time after any thing has been taken into the stomach, as early in the morning & is strictly speaking the urine of the blood hence its name — its specific gravity is from about 1.015* to 1.025+ for the most part — and is the most abundant

*Sp. Gr of urine in Winter.
+ " " " " " Summer.

abundant of the other varieties and possesses all the chemical & physical properties of this very important secretion.

Many tables have been given as to the different properties of urine in its normal state the most elaborate of which perhaps is the one arranged by Berzelius — according to whom 1000 parts of healthy urine contain about as follows.—

" Of Water	933.
" Urea ($C_2 H_4 N_2 O_2$)	30.10
" Uric acid ($C_{10} N_4 H_4 O_6$)	1.
" Sulphate of Potash	3.71
" Sulphate of Soda	3.16
" Phosphate of Soda	2.94
" Muriate of Soda	4.45
" Phosphate of Ammonia	1.65
" Muriate of Ammonia	1.50
" Phosphate of Lime & Magnesia	1.
" Vesical Mucus	.32

Of

of Free lithic acid, lithate of ammonia, and animal matter not separated from them } 17.14

of Siliceous Earths 03"

Besids the above named there is a small amount of Sulphur Phosphorous & also the colouring matter of the urine In children's urine there is also a little benzoic acid in addition.

But the Chemical composition of urine like many other points in medicine is differently stated by different chemists who have analized it but the uncertain accuracy of many of them make it entirely immaterial which we adopt. But Dr Prout thinks it probable that Berzelius (whose table I've given above) "Examined urine of a very high specific gravity & has in consequence overstated the quantity of solid ingredients in it. for the

he — Berzelius — has set them down lib. more than double the amount found by more recent analysis to exist — And we may easily conceive this lib the case, if the 1st or Polus variety & the 2nd or Chylous variety — be examined they will be found to differ very materially & if the urine voided in summer & that of winter be examined they will likewise differ much, it would be then necessary to test the normal standard of the year — for urine passed in summer — according to Dr Prout — has a specific gravity of 1025 & that passed in winter its Sp. gr. 1015. — & this is easy explained by recollecting that in the former season we perspire very much more than we do in the latter division of the year. & hence much of the water passes off through the kidneys which in winter is voided by the bladder. — hence the

urine

urine in summer has a greater specific gravity than in winter, - for the water having passed - in part - off through the pores of the skin, - for the same reason there is not so much urine passed in summer as in winter the proportion being about as 30 of the latter to 40 of the former. The mean being 35, - & 35 ounces is about the amount passed by an adult ~~he~~ man. -

I will therefore give an analysis which I believe was made out by Bequerel of 1000 parts of urine ~~as~~ having a specific gravity of 1,020 the mean & estimating as he did the quantity passed in the day & night to be 35 ounces - "containing as will be seen 967 parts of water & 33 parts of solid matter" - or as follows

" of water	967.
" urea	14.230
" uric acid	.468

of

Colouring matter, Mucus & Animal extractive matter, inseparable from each other	10.167
" Sulphate of Soda = $Na\,SO_3 + 10\,HO$	
" Sulphate of Potash = KO, SO_3	
" Bi phosphate of Soda = $NaO, 2HO, PO_5 + 2HO$	
" Bi phosphate of Magnesia	
" Bi phosphate of Lime	
" Bi phosphate of Ammonia	8.135
" Chloride of Potassium	
" Chloride of Sodium	
" Arsenate of Soda	
" Fluate of potash	

together with a trace of Silica.—

Tho these two analysis seem to differ so much yet it is likely each of them were the true composition of the urine tested. for some change in the system, or some little thing unknown as, may have changed the urine in one or another of these ways. a slight attack of hysteria, or mental anguish or any thing of a like nature may have

caused this appearance

To attempt to mention all the different causes which may and do often give rise to a change in the urine from its normal standard, would be almost impossible — so great would be their number, but it suffices to say that any of its chemical constituents may be changed — and that gravel may be produced by any thing which causes the chemical constituents to be changed to a sufficient degree tho' the lithic acid, phosphorus and iodine are perhaps the most frequent, — the water like all the other constituents of the urine may be changed in quantity — either augmented or diminished; in the first of these the specific gravity is of course lessened, this may be the case tho' the urine contain all

the natural constituents, — again the urine may be suppressed ~~entirely~~ entirely or if any be passed, it may be only in a ~~the~~ very concentrated form (&) containing all the chemical constituents in their normal proportion, except the water which is in a very small proportion. In this case the urine has a much greater specific gravity than natural & may amount to even 1.053.—

It is evident from the great change which may take place within the bounds of health that it cannot be considered morbid except when the general health of the patient is interfered with.

The most common disease of the urine, producing gravel is an ~~xxxxxxxxx~~ incrementation of the acid of the urine; if there be

be an abnormal quantity of acid in the urine it will unite with the Ammonia and as Uric acid has but a small "affinity" for the ammonia this excess of acid will precipitate the Uric acid in the form of an amorphous sediment or crystalline salts. The urine depositing this kind of sediment is always acid, as is told by its reddening litmus paper. There are two kinds of this amorphous sediment, the red & the yellow — the yellow is the lithate of ammonia together with the colouring matter of the urine; tho' this is called the "yellow sediment", it does not follow that it is always yellow for it varies in colour from a deep orange to nearly entirely white. The yellow deposit is

common

common in Children, and is frequently caused by a disturbance of the digestive functions or of the perspiration.—

The red sediment—This kind also varies in its tint, from a pale pink to a deep purple—it likewise is composed of Lithate of Ammonia—but not as in the former case, with the colouring matter of the urine,—but a peculiar colouring matter which Dr Bird has called "Purpurine" and according as this purpurine is more or less—so is the color of the sediment deeper or of a paler hue—this kind is often found in persons who suffer with diseased lungs, also in fat persons and those who do not take much exercise, and those who are Epicures.—from this I should be inclined to think that this "Purpurine"

as

-as Doct Bird has called it,- contains Nitrogen-, or consists entirely of that chem-ical constituent- (but not having proved this, of course I cannot say positively) My reasons for this supposing is that this kind of sediment is generally found in those who suffer with hepatic affections, lung & spleen diseases. I have seen this the case in two instances. (Myself (and perhaps it will not be out of the way here to say a few words of each case) The first was that of Myself a year or two ago when I suffered with a decided predisposition to pulmonary consumption, I discov-ered one day that there was a sed-iment in my urine which I found took of a decidedly purple color I did not then know the cause, but am then now that it was one of the secondary effects of the disease under which I was then laboring.-

The

The other is a case of a patient who I had under treatment last summer, who was suffering with Hepatitis & Gravel - whose urine likewise deposited on cooling a purplish sediment.-

So far as chemistry goes it is easy to account for the formation of this species of urinary deposit - If from dyspepsia or some other disease of the stomach, the blood gets in an acid state, or from a want of circulation of the perspiration - the Lithic acid is retained in the blood, which is in a well regulated constitution thrown off. We can easily imagine that in one or the other or in both of these ways the blood - may be over charged with acid, it must then in this state pass the renal vessel of the system in

the

the same state and the urine must likewise contain an abnormal amount of acid in solution. We may then readily imagine the following to take place. Urine in a healthy state contains:

healthy urine { Ammonia
Lithic acid

Lithate of Ammonia

Lithic acid in unhealthy urine

The Ammonia unites with ~~XXX~~ one proportion of the acid - whether this be lithic or other acid - and precipitates the proportion of lithic in the form of an insoluble powder. Lithic acid is dissolved in ammonia in very small proportions. One ~~hundred~~ thousand times the ~~xxx~~ vol ume of acid withholds it in solution.

The urine depositing this sediment is generally of a very red colour, and at the said before of an acid reaction on litmus paper and of a high

specific

specific gravity. The sediment deposited in this crystalline form is composed — as might be supposed from the reaction given above — of almost pure lithic acid.

The color of the urine varies much from a brick red or brownish — when it is accompanied by fever to a pale red or yellow, when there is no fever. The urine is as the said generally red. Some Pathologists use this as a sign by which to form their diagnosis of the disease. The sediment is also of a red color; the particles small and resemble much pulverized Cayenne Pepper. They are various in their shape. in the quantity of the deposit also varies much and is sometimes very great. Dr Gross of Louisville says "I have seen as much as four or five drachms

a day

a day discharged for weeks together
This form of the disease is more
frequently seen in children & old per-
sons than in those of middle life.
Dyspepsia - disorders of the cutaneous
secretion, & acidity of the stomach
especially the last - I know a young
man who is predisposed to this form
of calculus and if he indulges
in any acid, it is sufficient to
produce it - even a glass or two
of wine, or any thing calculated
to generate acid in the stomach
& through the organ in the blood
will produce a pain in the loins
and neck of the bladder and
pain with frequent attempts at
micturition - with high colored
urine and a sandy like deposit
is passed with the urine.
Symptoms are those given above
with retention and pain in the
testes; the addition of nitric acid

to

to the urine will precipitate the lithic acid.— Doct Ross says that the lithic acid is dissolved by nitric acid with effervescence and when the solution is evaporated to dryness is of a pink color, and this color is changed for a violet one by the addition of ammonia (2 Woods Pract. p. 393.- Ed iii.)

Treatment.— The first indication is to avoid strictly every thing which will produce acid in the any way in the formation of calculus or acid in the blood, hence the diet should be mild but nutricious, and as this is often but the effect of disease of the lungs, liver or stomach or skin— it should be our aim if possible to ~~[illegible]~~ regulate these organs to perform their natural duty. When it is caused by irritation inflammation or congestion of the urinary apparatus, our aim should

be

be to subdue the former & to relieve the latter; first - then if nature does not restore her equilibrium then we must endeavour to aid her - the diet should be strictly attended to - a moderate supply of brown bread & meat - fresh vegetables or fruit - not acid - but all highly seasoned food oily or saccharine - alcohol of all kinds should be strictly avoided as it prevents - by irritating the kidneys - a due action of those organs - To correct the acidity of the blood - Carb Soda, & some diaphoretic to regulate the action of the skin - Exercise in the open air is very assential in this disease, as in this way both the skin & the stomach are assisted, this must not be carried to fatigue however, for if so the blood will become loaded with nitrogenoid matter which is itself a cause of lithic

deposit

deposit.- Mercury and Calomel purgatives should be given to prevent any predisposition to constipation and also to discharge any bile which may block up the liver - this is necessary before entering upon a course of diuretics. Bathing or sponging the body absolutely necessary in this disease as well as the most strict attention to the changing of linen - as perfect cleanliness is "all important" to keep the skin in a healthy condition, for as we have seen the skin & kidneys are so closely allied in function that whatever effects one cannot fail to be felt by the other. - It has been said that bathing in water impregnated with carbonate of Potassa, & Soda. When the veins & stomach are empty is a good way by which to introduce alkalies into the blood. - The use of water taken internally

is

is highly advantageous & essential, this may be taken pure or in preparation with alkaline substances soda, potassa &c should be taken. Tonics are advantageous to assist digestion. Diuretics are of great importance in cases of gravel & stone for this pure distilled water is good. Spts. Nitric Ether, juniper berry infusion — are also excellent acting both as a diuretic & diaphoretic. Where this species of stone exists in the bladder and all of the above means of curing the disease fail of success, the bladder may be injected with a solution of Bicarb. Soda. This had better be performed with a double gold catheter so that while the solution is thrown in through one tube the contents of the bladder may pass out by the other, & also to prevent

prevent the over distention of the organ, & thus protect it from all danger of bursting, & also that the stream of water may have the effect of as if washing away the stone by degrees, as soda acting on the acid will dissolve the stone, as a medicine the Phosphate of Soda in good tole taken internally - for if too much Soda in its carbonized state be taken, it will act injuriously by forming an alkaline deposit by neutralizing one proportion of Phosphoric acid thus

Phosphoric acid — Phosphate of Soda
Phosphoric acid — Phosphate of lime
lime
Soda

Now the phosphate of Soda is ~~a liquid solution~~ soluble, & can easily be passed off in the urine, but one proportion of Phosphoric acid will unite with the lime, forming the Phosphate of lime which

which is insoluble — and if Phosphate of Soda be given there is still an abundance of Phosphoric acid in the urine

The oxalic deposit being second in frequency next claims our consideration — this is first seen in a white, glistening powder, suspended in the urine & has but little disposition to form itself into a stone unless it find something to attach itself to — which it may use as a nucleus.

The formation of this kind of calculus is favoured by whatever is calculated to impair the assimilative powers, & to depress the vital energies, — such as indulging in unwholesome food, exposure to cold, injuries of the nervous system, especially the spinal cord or brain also suppression of perspiration, Some articles of food also promote the —

The formation of this calculus such as tomato, sorrel, rhubarb &c which contain a proportion of this acid in their composition. The urine depositing this kind of stone is of an amber colour, but sometimes a little darker, or it may be of a pale hue. Little however is known (I believe) of the cause of oxalic lith=-iasis & the first symptoms are generally those of stone, even before the subject is himself aware of the existence of any disease.

Symptoms of this disease are those which are usually seen in dyspepsia - a depression of the nervous system, pain in the loins is almost constant, there is a frequent disposition "to pass off the water". which is voided with much difficulty, with heat & burning, Emaciation is a frequent companion of this disease as well as boils & eruptions of the skin.

Treatment -

Treatment.— It is obvious in this disease that the first thing to do is to improve the general health. This may be accomplished by attending to the diet — bathing in fresh water & friction with the hand or flesh brush or hair gloves, warm bathing is often of advantage also. Exercise in the open air & abstinence from all alcoholic liquors.— Tonics are demanded when the system is in a weakened condition.— Sulphate of Iron & Quinine have been recommended. When stone has formed, & the urine loses its acid reaction some of the alkalies, as Bi Carb Soda &c may be given.

This deposit is formed of oxalic acid & Oxide of ~~Cal~~ Calcium = $CaO\,C_2O_3$.— Phosphatic deposit.— This & species of lithiasis may be considered so far as chemical reaction is concerned to be exactly opposite to the lithic deposit.

deposit - the former being an alkaline and the latter an acid deposit. it is usually caused by an excess of alkaline matter in the blood - the reaction I've given in a former part of this - It is characterized by its whitish color, by its solubility in dilute muriatic acid - and its insolubility in ammonia and solution of potash. as Lithic acid deposit is called "red gravel" so the Phosphatic deposit may be called the "white deposit" or "white gravel" There are three varieties of white gravel or Phosphatic deposit: viz: 1st The Triple Phosphate or Phosphate of Ammonia & Magnesia or ~~[illegible]~~ Ammoniaco - Magnesian Phosphate. ("$MgO.\ NH_4O.\ 4HO.\ PO_5$"). 2nd is Phosphate of Lime ($8(CaO)\ 3PO_5$) 3rd is a Mixed Calculus composed of the two former (viz) Phosphate of Lime, & the Triple Phosphate or Phosphate

Phosphate of ammonia & Magnesia combined.

The Triple Phosphate deposit consists of Phosphate of ammonia and Magnesia; for which cause it is often called "Ammoniaco-Magnesian Phosphate deposit" — The urine which accompanies this deposit is of a pale or whitish color and very copious — of a low specific gravity ranging " 1.005 to 1.014. — at first it has a faint sickening smell but soon becomes offensive and of an ammoniacal smell — it is as might be supposed very slightly if at all acid having little effect on litmus paper — the powder is of a white color, some transparent, some opaque having sharp angles & edges.

The old are more subject to this form than either children or those of middle age. —

Symptoms. The symptoms are de-

—bility

debility - disorder of the digestive organs. - a dull, heavy, aching pain in the small of the back, - and the patient is generally very anemic. Cause. The causes of this is likewise dyspepsia, errors in diet, incaucious use of Mercury - and excessive nervousness, the use of too much Medicine of an alkaline character. especially Soda.

2nd Variety - The Phosphate of lime deposit. - is of a whitish, Grayish or drab colour. - it is ~~strictly speaking~~. There seems to be a difference of opinion with regard to this deposit - Dr Pavitt says "This salt is not, strictly speaking, deposited from the urine, but is secreted by the mucous membrane of the bladder & kidneys when chronically inflammed or otherwise deranged" (Pavitt's Surgery, p 480 Ed of 1834) but Dr S. D. Gross, seems to think it doubtful at least. - he says. "Whether this

this is really the fact or whether the two phenomena are merely coincident is unknown". "Without altogether denying the power of the mucous membrane of the bladder & kidneys to secrete phosphatic matter, I am disposed to regard the occurrence as one of great rarity. If we adopt this view it follows as a necessary corollary, that the deposit under consideration is derived in a great degree, if not exclusively from the urine" ("Gross on the diseases of the Bladder &c" page 337 Ed of 1857.) The supposition of its secretion from the kidneys & bladder has arisen from the fact that it is often accompanied with chronic cystitis. Sometimes it is more or less dark, and is mixed with the coloring matter of the urine. Symptoms of this kind of stone are just those of the preceding.

3d. Variety; or the mixed deposit, or fusible phosphates, as we have

said

Lacic is a mixture (hence the name) of the two preceding forms - and is very common - The urine depos-iting this sediment is of a pale color, fetid, and abundant and deposits a thick mortar like sed-iment on standing - The deposit is of a whitish colour partly a-morphous, and partly crystalized it is supposed both the effects of the joint agency of the kidneys and bladder - The causes of this disease are injuries of the blad-der & kidneys - or organic disease of these organs, dyspepsia, injur-ies of the spinal cord, mental anxiety, want of the natural rest for the mind & body, great & continued bodily fatigue -, un-wholesome food &c

The symptoms are pretty much those which attend the other spe-cies of the same disease - as pain

in

in the loins, dyspepsia, weakness, nervousness and Emaciation, the urine is passed with ~~[illegible]~~ considerable pain and often Stricture of the urethra.

Treatment, The treatment for all the varieties of this disease (ie) the Phosphatic deposit - are alike all depending for their origin upon an alkaline state of the blood and depressed and diseased digestive organs - they all require for their relief - to improve the digestion, and acidify the blood. For this end the patient should be very careful not to partake of any indigestible food - Wine & Brandy when old & good may be used in moderation, to assist in supporting the system - 'tis hardly necessary to repeat that Nutrition, constant & Exercise in the open air, are both assential. Tonics also as Iron, Gentian, Quassia, Iron, Chl. Quinine

Quinine & the Gentian are perhaps the most useful in this disease, to improve the digestion, & strengthen the system. If inflammation of the kidneys or bladder exist they must be subdued by the use of Mercury, Tart Ant & Potassa &c.
As this is an alkaline state of the system, acids may be administered to neutralize it. dilute Nitric acid is perhaps the best as it acts also as a tonic.
Anodynes are often very useful as the Potsii Camph, Hyoscyamus &c.
In this kind of disease also it may be found necessary to inject the bladder, if so it should be with an acid solution to destroy or rather to dissolve out the stone, if one exists in the bladder
It might not be deemed improper in a short essay like this to

to speak of the surgical treatment for calculus & suffices to say that if an operation is found absolutely necessary, there is no instrument which I've seen, which seems to accomplish the object with more ease to the surgeon, and at the same time more certainty of success than the one invented & used by our very able Prof' of Surgery, Dr N. R. Smith of the Univ' of Md.

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